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ABSTRACT

Prepared by the California State Department of Education, the booklet reviews program components for the educable mentally retarded (EMR). Legal provisions cited include identification, assessment, and reevaluation procedures. Such administrative aspects as financing and supervision are considered. The characteristics and learning styles of the EMR and the implications for curriculum are reviewed. A section on instructional models, goals, and objectives contains information on administrative and teaching models as well as on development of curriculum goals and behavioral objectives. Program evaluation is seen to involve product evaluation and curriculum validation. (CL)

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Programs for the Educable Mentally Retarded

in California Public Schools

Prepared for the
SPECIAL EDUCATION SUPPORT UNIT
California State Department of Education

by
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U.S. DEPARTMENT OF HEALTH,
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NATIONAL INSTITUTE OF
EDUCATION

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Foreword

"Go out of your way to be especially kind and helpful to those who are young or helpless or ill dressed or stupid or awkward or friendless," former Superintendent Edward Hyatt advised the school administrators and teachers of 1915. "Be modest and observe much," he told them. "Do not try to bring people up with a round turn. You are there to help folks along, not to hamper them and snub them with your official routine."

The advice of California's fifteenth Superintendent of Public Instruction is just as valid today as it was almost 60 years ago. We are in the business of helping people, of giving them new visions of their world and of themselves; and we do have a great responsibility in assisting both the handicapped children and those who are not handicapped.

California can be proud for having led the way in providing educational programs for handicapped children. However, we know the current program offerings must be improved and expanded. Thousands of handicapped children with special needs are on the waiting lists of special programs, but they are not yet being given the special help they need. Many more children in need of assistance through special programs have not yet been screened for placement.

To meet the needs of these children, we have developed a plan–a vision of what we believe must be done in California. The *California Master Plan for Special Education* was designed to provide a quality educational program for all of the state's mentally and physically handicapped children. The plan was developed by the Department of Education in cooperation with teachers, school administrators, parents, and children from throughout the state who worked cooperatively to identify the strengths and weaknesses of the existing special education programs.

The master plan, which seeks to equalize opportunities for all children in need of special education, represents both a conclusion and a commencement. It is the culmination of many months of planning and effort; it is also the commencement of a sweeping new movement toward comprehensive planning for the educational needs of exceptional children.

One new direction we are taking under the plan is to use a single designation, "individuals with exceptional needs," for all children receiving special services. However, during the transition period between now and the full implementation of the master plan, we must continue to maintain programs under the current provisions of the law. And since the law refers to programs for the educable mentally retarded, we in the Department of Education have a continuing responsibility to provide information and direction for programs with the EMR label. Thus, we are making this publication available for those of you entrusted with the important responsibility of providing educational programs for those with learning handicaps.

Let us hope that what we do here in California today will open new roads tomorrow for the individual who has special needs. I want for those children well chosen paths that give them warm feelings of love and understanding and opportunities to be rewarded for whatever initiative and skill they are capable of contributing to their society.

Former Superintendent Hyatt was so very right when he told us in education that we are "there to help folks along." Whatever else we do stands in the shadows of that greater accomplishment.

Wilson Riles

Superintendent of Public Instruction

Preface

This publication, *Programs for the Educable Mentally Retarded in California Public Schools,* was written in an attempt to provide information to those who are planning, managing, or evaluating programs for the educable mentally retarded.

The material in this publication should help administrators and teachers provide educational opportunities for those pupils who, because of retarded intellectual development, have significant learning problems.

The first three chapters of this publication contain material prepared by the late L. Wayne Campbell, Flora M. Daly, and Fred M. Hanson, Consultants in Education of the Mentally Retarded. Their contributions, originally written for the 1965 edition, have been updated to conform to existing statutes and regulations.

Chapter 4, "Characteristics and Learning Styles of the Educable Mentally Retarded," was prepared by Harry V. Wall, Chairman of the Department of Special Education, California State University, Los Angeles. Material in this chapter was compiled from papers written by Neil Brooks, Assistant Superintendent of Schools, Riverside County, and Annette Tessier, Department of Special Education, California State University, Los Angeles.

The instructional models, goals, and objectives presented in Chapter 5 were developed by C. Lamar Mayer, Professor of Special Education, California State University, Los Angeles; Dr. Wall; and the office of the Riverside County Superintendent of Schools.

Chapter 6, "Evaluation of Programs for the Educable Mentally Retarded," was written specifically for this publication by Dr. Wall.

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Chapter 1

Special Education Programs for the Educable Mentally Retarded

The California Legislature in 1947 made it mandatory for the offices of the county superintendents of schools, elementary school districts, and unified school districts to provide for the education of educable mentally retarded (EMR) pupils in special training classes (Education Code sections 895, 6902, and 6904). Two years later legislation that permitted high school districts to establish special training classes for educable mentally retarded pupils was passed (Education Code Section 6905). In 1956 it was made mandatory for high school districts with more than 900 average daily attendance (a.d.a.) to maintain such classes for the educable mentally retarded (Education Code Section 6904.5). In 1961 high school districts with under 901 a.d.a. were authorized to operate on a permissive basis classes at the secondary level (Education Code Section 6905).

The enrollment of educable mentally retarded pupils in special classes in California public schools from 1948 through 1973 is shown in Table 1. From the 1948-49 school year to the 1968-69 school year, enrollment in these classes grew steadily.

During the 1969 session of the Legislature, the California Association of School Psychologists and Psychometrists initiated House Resolution 444. This resolution strongly urged the State Board of Education to propose changes in the structure of special education categories and requested suggestions from the Department of Education for legislative changes to correct an alleged disproportionate number of minority-group children in classes for the educable mentally retarded. During the fall of 1969, the Department of Education held several hearings throughout the state to find answers to the following questions:

1. Are children from disadvantaged backgrounds, especially children with Mexican-American or Negro heritages, disproportionately represented in special education classes for the educable mentally retarded in California public schools?
2. If it is found that disproportionate numbers are enrolled in such classes, what are the factors that contribute to the placement of minority-group children currently identified as mentally retarded in classes for the educable mentally retarded?

TABLE 1

Annual Enrollment of Educable Mentally Retarded Pupils in Special Classes Maintained by California Public Schools, 1948–1973

	Enrollment		
School year	*Elementary**	*High school*	*Total*
1948–49	---	---	7,541
1949–50	---	---	9,864
1950–51	10,173	1,455	11,628
1951–52	12,164	1,650	13,814
1952–53	12,698	1,885	14,583
1953–54	13,655	2,044	15,699
1954–55	15,232	2,406	17,638
1955–56	16,487	2,959	19,446
1956–57	18,816	4,141	22,957
1957–58	21,349	5,344	26,693
1958–59	23,445	6,449	29,894
1959–60	26,903	7,063	33,966
1960–61	29,649	7,772	37,421
1961–62	33,297	8,763	42,060
1962–63	35,158	9,850	45,008
1963–64	37,234	11,154	48,388
1964–65	38,807	12,654	51,461
1965–66	39,172	12,985	52,157
1966–67	40,418	13,820	54,238
1967–68	41,372	14,496	55,868
1968–69	41,811	15,337	57,148
1969–70	39,934	14,144	54,078
1970–71	35,128	12,737	47,864
1971–72	27,002	11,206	38,208
1972–73	22,486	10,605	33,091

*Includes enrollment in elementary schools and in grades seven and eight of junior high schools.

Analysis of the collected data indicated that in the fall of 1969 a higher proportion of Spanish-surnamed and black pupils were enrolled in classes for the educable mentally retarded. However, this disproportionate enrollment did not appear to be a statewide problem, but rather one of local concern with the wide variation in the proportion of Spanish-surnamed and black pupils assigned to special classes.

Concern for the problem of overenrollment of minority-group children in special classes was widespread, and both professional educators and others shared this concern. Organizations representing minority groups were particularly active in focusing attention on this problem and in pressing for ways to correct the overenrollment of these children in special classes for the educable mentally retarded.

Early in 1970 the State Board of Education passed regulations that set new standards for individual evaluation of potential EMR students. At the same time the Board established regulations allowing for greater flexibility in programming through integrated programs of instruction and experimental-type programs. The 1970 California Legislature passed bills that encompassed the State Board of Education regulations. The new legislation required that all pupils in EMR classes be retested and that written permission be obtained from parents before pupils could be assigned to special class programs.

From October, 1969, to October, 1971, over 10,000 pupils were removed from EMR classes because of the changes in the law. As of October, 1972, 24,000 pupils had been dropped from the program because of reevaluation or because of the new standards by which pupils were being assigned to special EMR programs. In an attempt to facilitate the return of former EMR pupils to the regular school program, the Legislature in 1970 approved bills that allowed for a two-year transition program. During the 1972 session, Senate Bill 1218 extended the transition program for two more years through the 1973-74 school year. The transition program took many forms in the different school districts. Although this program has been of considerable assistance, it has not been completely successful, particularly at the secondary level, in helping the many borderline students adjust to the regular school program. School districts were not required to establish transition programs, and only about half the eligible students received help during the transition period.

The California Master Plan for Special Education, which was developed by the Special Education Support Unit, was adopted by the State Board of Education in December, 1973. This master plan should reduce the problems of labeling and increase the program options available to all exceptional pupils. The period between now and full implementation of the master plan will require a continued effort to resolve earlier problems and maintain programs that are within the provisions of the legislation and yet demonstrate a concern for all pupils who have special needs.

Chapter 2

Legal Provisions for Establishing Programs

The mentally retarded pupils for whom the public schools have a special responsibility are identified by Education Code Section 6901 as follows:

> "Mentally retarded pupils" means all pupils under the age of twenty-one years who because of retarded intellectual development as determined by individual psychological examination are incapable of being educated efficiently and profitably through ordinary classroom instruction.

The responsibility for the education of these mentally retarded pupils is defined in Education Code Section 6902 as follows:

> The education of mentally retarded pupils who are of compulsory school age and who may be expected to benefit from special educational facilities designed to make them economically useful and socially adjusted shall be provided for in the manner set forth in sections 6901 through 6913 and in sections 895 through 895.12. Such special education may be provided mentally retarded pupils below compulsory school age who are between five years nine months and six years of age and those above compulsory school age and less than twenty-one years of age.

Designated Responsibilities and Authorities

Regarding special programs for the mentally retarded pupils, responsibilities and authorities for the county superintendent of schools are set forth in Education Code sections 895 through 895.12; responsibilities and authorities for school districts are set forth in Education Code sections 6901 through 6913.

Responsibility of the County Superintendent of Schools

Each county superintendent of schools is charged by the Legislature with the responsibility for establishing and maintaining special schools or classes for all educable mentally retarded pupils who are of compulsory school age and who reside in the county and in elementary or unified school districts that have less than 901 average daily attendance (a.d.a.) in the elementary schools of the district. In accordance with Education Code Section 895(a), special classes or schools must be established in centrally located places, and the office of the county superintendent of schools must provide transportation for educable mentally retarded pupils to those centers. The concept of a "center," however, is provided only to accommodate the rural school districts because of sparsely populated areas where there are too few pupils at any one regular school site.

The classes for educable mentally retarded pupils should be an integral part of a school facility. The office of the county superintendent of schools must provide the professional staff, adequate psychological services, appropriate facilities, supervision, and an administrative structure for the special programs. Minimum standards for these special schools and classes have been established by the California Legislature in Education Code Section 6906.

The office of each county superintendent is authorized to establish and maintain special schools or classes for pupils who are between five years nine months and six years of age and for those who are above compulsory school age but less than twenty-one years of age. The county superintendent may contract with another district for the education of those educable mentally retarded pupils for whom he is responsible. As set forth in Education Code Section 895(b), the financial terms and other conditions of operation of the program shall be written into the contract. This authority does not relieve the county superintendent of his responsibility to provide adequate educational opportunities for educable mentally retarded pupils in his county.

Responsibility of the School District

The governing board of an elementary or unified school district that has an a.d.a. of 900 or more in the elementary schools of the district, or of a high school district that has an a.d.a. of 901 or more, must provide special education classes for the educable mentally retarded pupils who are of compulsory school age and who are not attending other special schools or classes (Education Code Section 6904).

The governing board of a school district that is required to provide special education classes for educable mentally retarded pupils of compulsory school age may provide classes for those pupils who are between five years nine months and six years and for those who are above compulsory school age but less than twenty-one years of age. An elementary or unified school district that has an a.d.a. of less than 901 in the elementary schools of the district may, with the approval of the county superintendent, establish and maintain special training schools or classes for educable mentally retarded pupils. The governing board of a high school district that has an a.d.a. of less than 900 may establish and maintain special training schools or classes for these pupils. A school district, with the approval of the district board of education, may contract with the county superintendent of schools or another district for the provision of this service (Education Code Section 6910). The reader should be cautioned to avoid the interpretation that the Department of Education in any way supports the concept of a "special training school" as noted in some of the very early developmental stages of programs and services to educable mentally retarded pupils. Separate schools and classes undoubtedly have fostered some of the inferior programs and resulting public concern with regard to isolation and possible segregation.

The authority for establishing and maintaining special schools and classes for educable mentally retarded pupils is delineated in Table 2.

Identification and Assignment of Educable Mentally Retarded Pupils

The California law relating to programs for educable mentally retarded pupils, as set forth in Education Code Section 6908, places

TABLE 2

Authority for Establishing and Maintaining Special Schools and Classes for Educable Mentally Retarded Pupils

District	*Average daily attendance*	*Authority*	*Source*
Elementary	900 or less	Permissible with approval of county superintendent	Education Code Section 895(a)
	Less than 901	Mandatory for county superintendent	Education Code Section 895(a)
	900 or more	Mandatory for district	Education Code Section 6904
	901 or more	Permissible for county superintendent to operate only under contract	Education Code Section 895(b)
High school	Less than 900	Permissible with approval of county superintendent	Education Code Section 6905
	Less than 901	Permissible for county superintendent	Education Code Section 895(b)
	900 or more	Mandatory for district	Education Code Section 6904
	901 or more	Not permissible for county superintendent	Omission from Education Code Section 895(b)

the major responsibility for identifying these pupils upon the school psychologist. Before an EMR program can be established, a school district must obtain the services of a well-qualified school psychologist, who is trained in modern assessment techniques, who understands the problems of mental retardation, and who appreciates the problems and strengths of school organization and classroom instruction. The psychologist should be well grounded in educational psychology with emphasis on the assessment of pupils with school-related learning problems and the development of educational objectives that are functional for teachers who work with pupils who have learning problems. The psychologist must, of course, meet certification requirements established by the State Board of Education.

Development of Classifications for the Mentally Retarded

Since 1919 several professional organizations have attempted to develop uniform classifications for mentally retarded persons. In 1921 the National Committee for Mental Hygiene merged with the American Association for the Study of the Feebleminded, and the expanded organization published *Classification and Statistical Report System for Mental Retardation*(23).* This manual has been revised numerous times by the Association for the Study of the Feebleminded, which is now known as the American Association on Mental Deficiency (AAMD).

In 1952 the American Association on Mental Deficiency, which had become the major professional organization concerned with mental retardation, obtained a research grant from the National Institute of Mental Health of the U.S. Department of Health, Education, and Welfare. This grant allowed the association to bring together representatives from the American Psychological Association, the American Medical Association, the American Psychiatric Association, and several other professional organizations that provide services to the retarded. The specific purpose of this group was to revise the manual on the classification of mental retardation. The group accomplished its purpose after five years of detailed research. As a result of this research, "A Manual on Terminology and Classification in Mental Retardation" (47) was published.

Development of an Operational Definition of Mental Retardation

In an attempt to define mental retardation, the AAMD research committee used a concept that includes an interdisciplinary approach and establishes the basis for distinguishing mental retardation from other behavioral disorders. In 1961 the AAMD defined mental retardation as follows:

---

*Numbers in parentheses appearing throughout all the chapters refer to entries in the list of "Selected References," which appear at the end of the document.

> Mental retardation refers to subaverage general intellectual functioning which originates during the developmental period and is associated with impairment in adaptive behavior (48).

In setting forth this operational definition of mental retardation, the research committee of the association noted that the definition incorporates the various meanings that historically have been associated with such concepts as feeblemindedness, mental deficiency, mental subnormality, and others.

To further clarify the definition as set forth by the AAMD research committee, the key words contained or implied in the operational definition were elaborated as follows:

> *Subaverage* refers to performance which is greater than one standard deviation below the population mean of the age group involved on measures of general intellectual functioning.
>
> *General intellectual functioning* may be assessed by performance on one or more of the various objective tests which have been developed for that purpose.
>
> *Developmental period* cannot be precisely specified [but] it may be regarded, for practical [and professional] purposes, as being at approximately sixteen years. [That is, conception through sixteen years.]
>
> *Adaptive behavior* refers primarily to the effectiveness of the individual in adapting to the natural and social demands of his environment. Impaired adaptive behavior may be reflected in maturation, learning, and/or social adjustment. These three aspects of adaptation are of different importance as qualifying conditions . . . for different age groups.
>
> *Rate of maturation* refers to the rate of sequential development of self-help skills in infancy and early childhood, such as sitting, crawling, standing, walking, talking, habit training, and interaction with age peers. For the first few years of a child's life, adaptive behavior is assessed almost completely in terms of these and other manifestations of sensorimotor development. Consequently, delay in acquisition of early developmental skills is of prime importance as a criterion of mental retardation during the preschool years.
>
> *Learning* ability refers to the facility with which knowledge is acquired as a function of experience. Learning difficulties are usually most manifest in the academic situation and if mild in degree may not even become apparent until the child enters school. Impaired learning ability is, therefore, particularly important as a qualifying condition of mental retardation during the school years.
>
> *Social adjustment* is particularly important as a qualifying condition of mental retardation at the adult level where it is assessed in terms of the degree to which the individual is able to maintain himself independently in the community and in gainful employment as well as by his ability to meet and conform to other personal and social responsibilities and standards set by the community. During the preschool and school-age years, social adjustment is

> reflected, in large measure, in the level and manner in which the child relates to parents, other adults, and age peers (48, pp. 3-4).

This operational definition of mental retardation developed by the AAMD indicates that various aspects of mental retardation may reveal themselves during different levels of maturation.

The school psychologist must determine eligibility for placement in special classes on the basis of the behavioral characteristics of the child. An IQ score alone cannot be used as the criterion for determining eligibility. The public school is concerned with both the learning ability and the social adaptive ability of the pupil. A pupil whose learning ability is at the borderline retarded level may be severely impaired in social adaptive ability and, therefore, may require special placement.

The American Association on Mental Deficiency has established levels of mental retardation. Because the entire structure for IQ calculation is based on normal distribution, the most valid method of identifying significant points along the base of the normal distribution is in terms of standard deviations. The levels of mental retardation, therefore, are defined in terms of standard deviations from the mean. These levels are borderline retardation, mild retardation, moderate retardation, severe retardation, and profound retardation. The range of standard deviation is from one full standard deviation below the mean through five full standard deviations below the mean. Identification based upon the concept of standard deviation provides a stable foundation upon which all professions concerned with integrating the services for the retarded can build understanding, communication, and cooperation. The statistical inferences should not, however, be regarded as hard and fast determinants of intellectual ability; they are comparative indicators of performance on a standardized test. The collected information is only one of several indications of intellectual ability. The *Report of the Task Force on Education and Rehabilitation* of the President's Panel on Mental Retardation contained the following:

> A definition which, in general, meets the demands of a positive, dynamic, flexible, and multidimensional concept relative to education and habilitation . . . would be that developed by the AAMD.
>
> Functional classifications of the retarded, in terms of measured intelligence, are presently confusing, with a variety of terminologies, categories, levels, and scores in use. Common agreement in this area would be most helpful in eliminating semantic difficulties and in facilitating the exchange of ideas among the various disciplines.
>
> A suggested way of improving this situation is to bring into common use the AAMD behavioral classification of measured intelligence levels, according to the level of deviation (103, p. 24).

California's Study Commission on Mental Retardation was vitally concerned with the problems of definition and identification of mental retardation. After much research and discussion, the commission accepted the AAMD language as a working definition. The commission also accepted the AAMD classification system of mental retardation (100).

Assessment of Educable Mentally Retarded Pupils

Each office of the county superintendents of schools and each local school district charged with the responsibility for establishing and maintaining special education programs for mentally retarded pupils should maintain an active screening and referral process.

Referral Procedure

Referrals for additional screening and possible individual evaluation might be made by one of the following:

- A teacher who has instructional responsibility for the pupil
- The pupil's parent, guardian, or authorized representative
- A principal, vice-principal, counselor, or other school official
- A school nurse or social worker
- The pupil's physician
- A person designated by the program administrator to have such responsibility

The pupils who should be referred to the school psychologist and the local admissions committee are those who demonstrate a general pattern of low academic achievement, maladaptive or immature behavior, poor social relationships, and consistently low standardized test scores.

Informal Assessment

The school psychologist should carefully consider the reasons for referral and gather additional informal data, as he deems necessary, concerning each pupil in his current educational program. Such informal assessment might include classroom and playground observation, a review of the pupil's recent work, consultation with the teacher and other school personnel regarding the pupil's problems and progress, and discussion with the pupil and parent or guardian. On the basis of the referral information and the informal assessment data, the psychologist can determine whether or not an individual case study is justified. This decision will be subject to review by the local admissions committee.

Parental Permission for Psychological Evaluation

Written permission must be obtained from parents before a pupil may be subjected to psychological evaluation. This requirement is set forth in Education Code Section 6902.085 as follows:

> After a student has been screened and referred, written permission for the individual psychological evaluation shall be secured in a conference with a school official and the parent or guardian or his authorized representative. . . . Permission documents for individual psychological evaluation, and placements, shall be written in English and in the language of the parent or guardian. Conferences and notices to inform the parent or guardian of the nature of the placement process, the committee conclusion, and the special education program shall be in the home language of the parent or guardian.

At the conference the parent or guardian should be given the following information:

- The reasons for the initial referral
- The nature of a psychological evaluation and the possible types of tests to be administered
- A complete explanation concerning the use of confidential information, such as who will have access to the psychological evaluation and test results. (See Education Code sections 10751, 10757, 11801, 11802, 11804, and 11805.)

Individual Case Study

The Education Code requires that before a pupil may be placed in a special education program he must be given a complete psychological examination. This requirement is set forth in Education Code Section 6902.085 as follows:

> No pupil shall be placed in a special education program for the mentally retarded unless a complete psychological examination by a credentialed school psychologist investigating such factors as developmental history, cultural background, and school achievement substantiates the retarded intellectual development indicated by the individual test scores. This examination shall include estimates of adaptive behavior.

Data gathered from ten evaluation areas will form the basis for the assessment of the rate of intellectual development. The school psychologist will collaborate with other school personnel regarding appropriate classroom placement and selection of curricular approaches that will promote maximum learning for the pupil. Although the gathering of all information need not be the responsibility of the school psychologist (e.g., the teacher might submit the educational history, the nurse might submit the developmental and health history, or the speech and hearing specialist might gather the suggested language development data), responsibility for a case study summary of all materials should rest with the psychologist.

The individual case study must include the review of objective data in the following ten evaluation areas:

1. Educational history. A summary should be provided of previous records and teachers' statements concerning the pupil's achievement, work habits, peer relationships, and specific learning strengths or weaknesses. Any special programs in which the pupil has participated (speech therapy, group guidance, or special reading projects) should be reported. The report should include referrals, retentions, and number of schools attended. A summary of results and recommendations from any previous psychological case study should be included.

2. Developmental and health history. A developmental history of the pupil should be compiled during conferences with the parent or guardian. Special attention should be given to significant developmental delays in such behavior as walking, talking, appropriate affective responses, play activities, and peer relationships within the home and the community.

A report on the health and physical condition of the pupil must be submitted, because it is imperative to eliminate the possibility that a physical condition is the pupil's primary handicap. At the conference with the parent or guardian, information should be obtained regarding the pupil's health history, including information such as prenatal, delivery, or postnatal difficulties; chronic health problems; childhood diseases; accidents; and surgery. Visual and auditory test results, obtained within the preceding 12 months, should be included, along with the results of any recent physical examination. Appropriate recommendations for the remediation of any health-related problems should be listed. In some instances a current medical review may be needed.

3. Intellectual ability. As one measure of a pupil's intellectual ability, an individual intelligence test should be administered in the language in which the child is most fluent and has the best capacity to understand. Whenever feasible, pupils should be given intelligence tests with verbal and nonverbal subtests. Test research indicates that the preferred instruments for assessing intellectual ability are as follows:

- *Wechsler Intelligence Scale for Children* (WISC)
- *Wechsler Adult Intelligence Scale* (WAIS)
- *Stanford-Binet Intelligence Scale,* preferably in combination with the *Columbia Mental Maturity Scale* (1971 revised edition) or the *French Pictorial Test of Intelligence* (especially useful for children whose mental age prohibits valid administration of the *Wechsler Intelligence Scale for Children*)

Authorized Spanish versions of these tests should be used only if the pupil's primary language matches that supplied in the Spanish version. Caution should be exercised in interpreting the results of such tests.

Interpreters may be used only when it is impractical to obtain a credentialed school psychologist who fluently speaks the pupil's primary language. As required by Education Code Section 6902.085, written parental approval should be obtained whenever persons other than credentialed school psychologists are used as interpreters.

When an interpreter is to participate in a conference, he should be thoroughly briefed on the importance of his role in obtaining accurate translations for use in gathering case study information. The interpreter should also be cautioned that his function is that of a translator and not an evaluator. Any person acting as an interpreter must provide the school district with written affirmation that he will respect the confidentiality of any communication that may transpire during a conference. The interpreter's name should be included in the case study record.

4. *Cognitive development.* A thorough review of problems of assessment with the educable mentally retarded has clearly indicated that an assessment of cognitive development would provide invaluable supplementary information about a child's intellectual functioning. Such an assessment of cognitive development with its more complete description of a pupil's level and type of reasoning will not only contribute significantly to an evaluation of the degree of retardation, but it will provide the psychologist with essential information for teacher collaboration in planning the pupil's individual program.

Unfortunately, standardized instruments for measuring the level of cognitive development for various ages and within a reasonable length of time are not currently available, although some research and development effort is being expended in this direction. In the interim, the psychologist should become familiar with the theory and research in this field and, wherever possible, should attempt an informal but informed assessment of the pupil's stage of cognitive development.

5. *Language development.* The bilingual status of a child and his ability to make use of his language for learning must be determined. The psychologist and speech and language specialist should differentiate, for programming and placement purposes, the child who is not learning in the classroom because of a language development deficit from the child whose retardation is consistent across all areas of assessment. In a comprehensive assessment of language, semantic as well as syntactic components should be examined.

6. Adaptive behavior. An assessment of adaptive behavior, defined as the pupil's ability to perform successfully in the social roles considered appropriate for his age and sex, should be included in the evaluation. Until adaptive behavior scales are standardized and approved by the California State Board of Education, such assessment must include, but not be limited to, a visit, with the consent of the parent or guardian, to the pupil's home by the school psychologist and interviews with members of the pupil's family in their home. If the language spoken in the home is other than English, such interviews will be conducted in the language of the parents.

7. Self-concept. The psychologist should evaluate the pupil's attitudes concerning his abilities to succeed. Some instruments currently available for assessment of self-concept include:

- Bower and Lambert's *Directing the School Play*, Section II, for grades three through seven, or *A Picture Game* for kindergarten and grades one through three
- *Coleman Informal Assessment*
- *California Test of Personality*

The psychologist should become familiar with these scales and administer the one he considers to be the most appropriate.

8. Assessment of basic skills. The pupil's basic skills may be evaluated by any of the following:

- Standardized individual or group diagnostic tests for reading and mathematics
- Reports of the student's current level of achievement in reading and mathematics
- Informal tests using standard teaching tools

9. Outline of educational objectives. The psychologist, in collaboration with the teacher and other appropriate school personnel, should submit a recommended outline of instructional goals that will serve as the basis for developing the pupil's educational objectives. The pupil's level of intellectual ability and his stage of cognitive development must be considered in establishing appropriate educational objectives. Educational objectives should include the following:

- An operational definition of expected learning or behavior that specifies the type as well as level of learning or behavior
- Specified ways of measuring the pupil's achievement of these objectives

10. Additional information. Other pertinent information may be available that would assist the admissions committee in making a program recommendation. Education Code Section 6902.055 requires the district to consider additional information and provide the parent an opportunity for representation during the admissions committee meeting. Such information should be sought for inclusion in the case study. Parents or guardians should be informed of this right as a routine procedure when they are being asked to grant permission for testing and placement. Education Code Section 6902.055 further states the following:

> Whenever any pupil is being evaluated for placement in a program for mentally retarded pupils by an admissions committee pursuant to Section 6902.05, the parent or guardian of the pupil may have a physician, optometrist, psychologist, social worker, or teacher, whether certificated or not, represent the pupil and present additional material, if any, to assist the admissions committee in its determination with respect to the pupil.
>
> The representative so selected shall have no decision-making power with respect to any determination to be made by the admissions committee. The representative so selected may be an employee of the school district.

Assignment of Pupils to EMR Programs

The admissions committee will perform the following functions:

- Analyze the complete case study of each pupil being recommended for assignment to a special program for the educable mentally retarded.
- Determine the pupil's eligibility for placement in the program for the educable mentally retarded after a thorough review of all available information.

Each member of the committee must try to identify for the pupil the best possible educational assignment that is available within the district.

Recommendations of the Admissions Committee

The final recommendations of the admissions committee may include one of the following:

- Pupil is ineligible for placement in a special education program for the mentally retarded; pupil should remain in regular instructional program with modifications suggested by the case study.
- Pupil should be placed in an integrated program of instruction, special day class, or experimental program (if authorized) as described in Education Code Section 6902.
- Pupil should be enrolled in a special education program for the trainable mentally retarded in accordance with Education Code Section 6903.

- Pupil should be placed in another special education program that is more appropriate to his needs.
- Additional study and psychological and educational evaluations are required.

Education Code Section 6902.085 states the following:

> No pupil shall be placed in a special education class for the mentally retarded if he scores higher than two standard deviations below the norm, considering the standard error of measurement, on an individual intelligence test selected from a list approved by the State Board of Education except as provided in Section 6902.095.

The exception to the two-standard-deviation restriction is noted in the following excerpt from Education Code Section 6902.095:

> In exceptional circumstances, after an examination of all pertinent information, including relevant cultural and adaptive behavior data, the admissions committee may by unanimous vote agree to place a pupil in a special education class for the mentally retarded in spite of an individual test score higher than two standard deviations below the norm, considering the standard error of measurement. The committee shall take notice of and be guided by the legislative intent expressed in Section 6902.06.

No pupil should be assigned to an EMR program when he is being tested in a language other than English if he scores higher than two standard deviations below the norm, considering the standard error of measurement, on the nonverbal intelligence test or on the nonverbal portion of an individual intelligence test, which includes both verbal and nonverbal portions, except as provided in Education Code Section 6902.095. No assignment should be considered permanent.

The committee may recommend particular educational approaches, methods, or services that more appropriately meet the needs of the individual pupil. These could include recommendations for additional services such as remedial physical education, speech therapy, English as a second language, or counseling.

A written report of the conference meeting of the local admissions committee should include all of the following:

- The committee's findings regarding the type and extent of the pupil's assets and handicaps and the relationship of these assets and handicaps to the educational needs of the pupil
- The committee's decision concerning eligibility and recommendations as to placement of the pupil in the most appropriate special education program
- The committee's determination regarding the ability of the pupil to profit from participation in an EMR program

- The committee's recommendation regarding particular methods or services from which the pupil might reasonably be expected to profit
- The names and titles of the committee members present at the meeting at which the recommendations were made
- The outline of educational objectives with specific program recommendations as approved by the committee, including recommendations for any additional services

A committee recommendation to place a pupil in an integrated program of instruction, work study program, special day class, or experimental program must be determined by a majority vote of the committee. A concurring vote from the psychologist is not necessary. Assignment in a specific class or with a particular teacher is an administrative responsibility and is not the function of the admissions committee, although the committee may make recommendations.

Any member of the local admissions committee who dissents from the final committee recommendation shall attach to the final recommendation a statement including his reasons for such objection and his alternative recommendations.

Conference with Parent

Whether or not the pupil is recommended for placement in a special class, the psychologist or other appropriate staff member will meet with the parent or guardian to summarize the information gathered during the case study.

After the admissions committee meeting, a committee member will meet with the parent or guardian or his authorized representative to discuss the committee's conclusion. When the admissions committee has recommended special placement, the parent or guardian must be given an exact description of the special education program. The parent or guardian should be told that this program is for pupils who have retarded intellectual development.

As required by Education Code Section 6902.085, any communication with the parent or guardian concerning the nature of the placement process, the committee's conclusion, or the special education program must be conducted in the home language of the parent or guardian.

The parent should have an opportunity to meet the special education staff and observe the special class program that has been recommended for his child. A report of this visit shall be made a part of the pupil's case study files.

Written Consent of Parent

Education Code Section 6902.085 states the following:

> No pupil shall be placed in a special education class for the mentally retarded without the written consent of the parent or guardian of the child after a complete explanation of the special education program. Permission documents for individual psychological evaluation, and placements, shall be written in English and in the language of the parent or guardian.

Conference with Pupil

After parental permission has been given to place the pupil, but prior to placement, the new program or class should be explained to the pupil.

Reevaluation of Educable Mentally Retarded Pupils

The admissions committee must annually review all pupils enrolled in special education programs for the educable mentally retarded.

Annual Review

The annual review will include a report from the pupil's special class teacher. This report should contain the following:

- The general adjustment of the pupil to the school situation
- The pupil's academic progress and level of achievement during the preceding year (if applicable)
- A summary of the most recent conference held with the pupil's parents or guardians
- A chart of the pupil's progress through the outline of educational objectives submitted the preceding year as assessed by the measurements specified in the outline

If the pupil has not achieved the objectives as outlined, an explanation should be presented with the report. NOTE: Accountability is for the current year; however, information on the preceding year's progress may be of use in evaluating the pupil's present achievements.

As part of the annual review, the pupil's educational objectives for the new academic year should be outlined by the staff. The report should specify the level and type of behavioral goal for each area; i.e., language development, number concepts, and self-concept, as well as methods of measuring achievement of the objectives.

Other instructional or professional staff members should submit annual reports regarding the performance of the pupil, including any changes in the pupil's physical, social, or psychological condition.

When doubt exists as to the appropriateness of the placement of any pupil in a special program, the admissions committee may request additional evaluation of any component.

Complete Reevaluation

A complete reevaluation of each pupil placed in a program for the educable mentally retarded should be completed at least every three years. This reevaluation should cover all areas of the original case study. The psychologist also may consider a complete reevaluation at any time the parent or guardian, the admissions committee, the special class teacher, or other staff member involved in the educational program for the pupil feels that this process is needed because of a change in behavioral patterns. The person requesting the reevaluation shall set forth the reasons for such request on forms provided for this purpose by the district. This complete reevaluation should be a joint endeavor of the admissions committee and other staff members involved in the pupil's educational program.

Chapter 3

Administrative Responsibility and Evaluation Programs

The county superintendents of schools and the governing boards of school districts charged with the responsibility of establishing and maintaining special training classes for educable mentally retarded pupils have been provided a legal framework to guide them.

Designated Administrative Responsibility

The public school administrator has the responsibility of identifying and implementing procedures to provide the necessary finances, facilities, and education programs for every pupil eligible to attend school. These procedures must be consistent with the educational objectives, directives, rules, and regulations established by state law and local boards of education.

The key to the development and success of special programs for educable mentally retarded pupils is the attitude of the administrator toward the retarded pupils. Successful programs for retarded pupils cannot be established and nurtured unless administrators accept the basic educational right of the pupils and are sensitive to their special needs and learning handicaps.

In accordance with Education Code sections 895(a) and 6904, the chief administrator has the responsibility to provide, with the approval of the local board of education, an operational framework within which specialized services for the retarded can be developed. This framework includes securing qualified personnel and developing policies and procedures for the educational program for mentally retarded pupils.

Maximum Enrollment in a Special Class

As required by Education Code Section 6902.3, the maximum enrollment for a special class is 18; however, in a class in which the chronological age spread is greater than four years, the maximum enrollment is 15.

Minimum School Day

A special apportionment for programs for mentally retarded pupils cannot be reimbursed if the special classes are conducted for *less than* the minimum school day. The minimum school day in grades one through three is 230 minutes (Education Code Section 11005). The minimum school day in grades four through eight and in special day and evening classes of an elementary school district is 240 minutes (Education Code Section 11006). The minimum school day in any high school, except in an evening high school or a continuation high school, is 240 minutes (Education Code Section 11052).

If the teacher of a special class is given other duties that encroach on the full regular school day, the class does not qualify for a special education allowance. Any portion of time given by the teacher to assignments beyond the regular school day other than for mentally retarded pupils cannot be included in the computation of the cost of operating the program for the mentally retarded pupils (California Administrative Code, Title 5, sections 3405 and 3406).

A class for mentally retarded pupils is described by Education Code Section 6902.2 as follows:

> The class shall be maintained for at least the minimum school day. The class shall be taught by a full-time teacher whose responsibility is to teach pupils enrolled in the class for the school day as established by the governing board for regular classes for pupils who are at the highest grade level in the special class.

California Administrative Code, Title 5, Section 3408 states the following:

> Special class teachers shall be assigned to the instructional program of the special schools or classes on a full-time basis at the ratio of at least one teacher per special class. Additional staff may be assigned on a less-than-full-time basis beyond this basic staffing ratio.
>
> The time during which a special class teacher is providing general supervision may be used in performing duties which directly contribute to the special class pupils and the special class program but may not be used for duties and responsibilities to pupils not enrolled in a special class program.

Deviations in staffing ratios are permitted only as part of an experimental program that has been approved in advance by the Superintendent of Public Instruction.

Course of Study

The administrative head of the school district is responsible for enforcing a course of study that has been developed and adopted for the mentally retarded according to the procedures set forth in

Education Code Section 5801. This section authorizes the development of a separate course of study for elementary school pupils who would profit more from a special course of study than from the required course for regular pupils. In accordance with Section 5801, a course of study specifically designed to meet the needs of mentally retarded pupils in kindergarten and grades one through twelve must be developed and substituted for the course of study adopted and provided for regular pupils. The special course of study must be approved by the administrative head of the district and adopted by the governing board. When the mentally retarded pupils have satisfactorily completed the course of study developed and adopted especially for them, they are entitled to a diploma (Education Code Section 6906.5).

The teacher should be one of the key persons involved in developing a special course of study. The objectives should be translated into learning experiences and presented in logical sequence consistent with the pupil's level of development. Any course of study adopted must provide the flexibility to be adapted to the specific instructional needs of individual pupils.

Consultation and Supervision

As stated in Education Code Section 8501.3, the administrative head of the school district, the school principal, and appropriate special education supervisors must cooperate if adequate consultation and supervision are to be provided for all special classes conducted by the district. The *California School Accounting Manual* (17), in defining those services that constitute legitimate charges under the heading of supervision, states that the term *supervision* is used to describe activities involving the actual improvement of instruction under the direction of supervisors and assistants. These activities may include the following:

- Personal conferences with teachers on instructional problems
- Classroom visitation
- Group conferences with teachers
- Demonstration teaching

The term *adequate supervision* implies that teachers of mentally retarded children will be supervised by persons who are knowledgeable of the mental, physical, social, and emotional characteristics of mentally retarded pupils and who are experienced in teaching mentally retarded pupils.

The consultant or supervisor is concerned with the total educational program for the mentally retarded, including the curriculum, physical facilities, equipment and supplies, selection of teachers and pupils, and provision of psychological services. The consultant or supervisor must help the classroom teacher to identify and evaluate the following:

- Specific objectives for the class
- Relative values of various methods and procedures of presenting learning activities
- Appropriate equipment and materials for the program consistent with the needs of the children enrolled and the stated objectives of the program
- Methods and techniques of evaluating and recording pupil progress
- Methods of articulating the educational provisions of the curriculum at various levels
- Areas for program evaluation and research relative to program needs
- Specific items to be included in the annual inservice training program

If the school personnel do not have the requisite preparation and experience for supervising programs for the mentally retarded, then the administrator should explore ways and means by which adequate consultation and supervision can be made available. In some districts supervision is provided through a contract with the office of the county superintendent. In other districts adequate supervision is provided through interdistrict agreements. Trained personnel from local institutions of higher education may be asked to act as consultants for inservice training, evaluation, and the like.

Inservice Training

Special class teachers should be included in meetings of the regular teaching staff whenever these meetings apply to their needs. These general inservice meetings, however, do not give the special class teacher an opportunity to focus his attention on the problems of the mentally retarded pupils. In districts where several special classes exist, regular staff meetings should be scheduled. These meetings should involve teachers of the mentally retarded and other staff members concerned with the program. In districts with only two or three classes, an effort should be made to schedule meetings with the special class teachers of adjoining districts. In addition to the regularly scheduled staff meetings, inservice training institutes may be arranged by the office of the county superintendent of schools. If this is done, the superintendent should plan and coordinate special section meetings for teachers of the mentally retarded as part of an institute or workshop program.

Special class teachers should be encouraged to attend annually at least one area, regional, or state meeting of a professional organization that serves the needs of retarded pupils. In addition, the program administrator may arrange for the special class teachers to visit exemplary EMR classes in other school districts.

School-Community Relationship

The education of mentally retarded pupils is a community problem, and no plan for them can be wholly successful if it lacks community support. The school district administrator should assume leadership in establishing a positive school-community relationship by interpreting the goals of the special class program to the community. School personnel, community agencies, and business, professional, and lay groups must work together to meet the physical, mental, and social needs of the mentally retarded. Community relationships are critical if positive work-study programs and postschool employment opportunities are to be developed. The recreational programs available in the community are essential components of a comprehensive special education program that will meet the social needs of retarded adolescents and young adults.

Financing the EMR Program

The California Education Code has provided the basis for financing the educational programs for children in California public schools. Financial support is derived from state and local taxes. The expenses incurred in educating children in regular classes are met through the following sources of financial support:

- District funds raised by local taxes
- Basic state aid
- State equalization aid and other supplemental aid

The expense of educating mentally retarded pupils in special schools and classes is paid from these funds in an amount per unit of a.d.a. that should equal that paid per unit of a.d.a. in regular classes. The district also receives from the state an apportionment for each class unit of 15 or 18 a.d.a. maintained by the school district.

In the calculation of the total income available to meet the operating expenses contained in the budget, the following should be included:

1. An equal share, based on a.d.a., of the local funds derived from local taxes
2. An equal share, based on a.d.a., of state funds derived from basic aid, equalization, and other supplemental aid

3. The special class reimbursement, which adds to the foundation program, based on a.d.a., an amount sufficient to provide a guaranteed support level for each class unit
4. Additional local funds to provide the desired quality program

The sum of items 1 and 2 can in no case be less than the state foundation program.

Physical Facilities and Equipment

Maximum educational progress is achieved in an environment that is designed to meet the needs of the pupils. One of the basic social needs of educable mentally retarded individuals is for them to learn to interact with persons in a normal social setting. Society in turn has an obligation to learn to accept and interact with the handicapped.

Rationale for separate classes. Special classes have been developed to provide opportunities for pupils whose mental capabilities make it impossible for them to profit from the regular educational program. These special classes should not be considered as a completely separate educational program. They are that part of the total educational program that is in addition to, or uniquely different from, the education program made available for the regular students.

Mentally retarded pupils can best be educated when they are placed in small groups with experienced teachers who are equipped with the special techniques and facilities that help these pupils learn.

Location of classrooms. Research has indicated that pupils who require special education services generally make a more satisfactory adjustment when their school programs are organized to permit a comfortable and planned intermingling with the rest of the school population. Therefore, the needs of educable mentally retarded pupils are best met in special classes within a regular school. These classes are offered as a special service to the retarded pupil and must be considered part of the total community school program. This kind of organization affords mentally retarded pupils the opportunity of entering into certain school activities and interacting socially with nonhandicapped pupils of their own age. The retarded can thus benefit from the services of the professional staff as a whole and the resources of the total school plant. Kirk (58) describes several methods of establishing special classes for mentally retarded pupils within regular elementary and secondary schools.

Mentally retarded pupils frequently suffer from lack of acceptance by their parents, the community, the school administrators and staff, and their peer group. They do not have the ability to adjust to their environment as readily as nonhandicapped pupils. Therefore, they must be permitted to develop the security that stems from having a home base. These pupils should not be moved annually from one attendance center to another.

Special classrooms should have easy access to the general facilities of the school. When a special class enrolls pupils from the entire elementary-school-age range, the class should be located near the middle grade classes of that school. In secondary schools the special class should be in the same general location as the classes emphasizing vocational skills, to facilitate interaction. The location of classrooms affects the morale of the students, the acceptance of the special class teacher by other teachers, and the acceptance of the special class pupils by the school and the community. It also affects recruitment of good teachers, which will continue to be a major problem in any district that places the least able pupil in the least desirable educational environment.

Number of classrooms. The number of special classrooms is determined by the number of mentally retarded pupils. To avoid the complex problems created by oversaturation, the number of retarded pupils assigned to any one school should not exceed 1.5 times the average number of handicapped individuals within a given general school population. National statistics indicate that school-age educable retarded pupils equal 2 percent of the school population. According to the saturation formula, this means that 3 percent of the total population in any single school is an appropriate saturation figure for the educable mentally retarded. Oversaturation poses severe problems for adjustment of normal children as well as the handicapped. Oversaturation usually results from the removal of pupils from their attendance area or community. This imposes unnecessary hardship upon pupils already burdened with difficult daily adjustments. In addition, oversaturation frequently complicates transportation and increases the cost of the program.

Size of classrooms. Facilities for educable mentally retarded pupils should be designed to fit an educational program that is specifically planned for each special class. Although fewer pupils are enrolled per class, the special class needs more space for its activity-centered program, which revolves around functional processes of daily living. The specific activities for any group vary according to the physical, social, mental, and emotional maturation of its pupils, but experience has shown that an activity-centered program at any age level requires additional space for efficient learning.

Evaluation

Education is a process involving constant change. A school administrator must concern himself with this change, its direction, the factors that affect it, and the methods of evaluating it. Through evaluation the administrator can measure the effectiveness of the school's educational program. By means of the curriculum, the efforts of the students can be coordinated and directed toward desirable behavioral objectives. Evaluation, supervision, and inservice training should compose an integrated program through which the curriculum is strengthened, expanded, and refined.

Evaluation must be a vital part of the total educational program for mentally retarded pupils. Program evaluation is concerned with the framework and content of the curriculum. Pupil evaluation is concerned with the extent to which the individual pupil is profiting from the curriculum.

Program Evaluation

Special programs for the educable mentally retarded have been criticized in the professional literature because often the programs presented were inconsistent with the stated objectives. Confusion results when program objectives are stated in vague, elusive terms. Hence, the first step in program evaluation must be a critical assessment of the existing objectives and the match between pupils and the objectives. The professional staff must be able to answer the question: What are we trying to teach these pupils?

The primary instructional goals for the mentally retarded are set forth in Education Code Section 6902 as "social adjustment" and "economic usefulness." These primary goals should include physical health and development, personal hygiene and grooming, language and communication skills, social and emotional adjustment, basic home and community living skills, occupational and vocational information and skills, and citizenship. Every classroom activity should contribute in some meaningful way to achieving these goals.

Some individuals have difficulty in separating the goal from the objective or the method of reaching the goal. If these individuals are unable to separate such important factors, their program may develop into one that is completely different from their original goal. For example, one of the major goals of the educational program for the mentally retarded is to prepare each pupil to become a productive citizen. To do this, the pupil should be able to do some reading. Reading, however, must not become the goal itself, but only an objective or a method of reaching the goal. The educational goals for the educable mentally retarded are not reading, writing, and arithmetic per se; if these skills are accepted as the primary goals, then EMR pupils should remain in regular classes where academic skills are emphasized. Academic skills can be objectives when they are taught within the context of the broader goal and when they are appropriate skills for the cognitive level of the pupil.

Persons who evaluate any program for the mentally retarded must be actively concerned with the following questions:

1. When pupils have completed the program, what skills and abilities should they possess?
2. Are these expectations appropriate and attainable considering the learning abilities of the pupils?
3. Do the methods and procedures provide the best results consistent with the stated objectives for an individual pupil or group of pupils?
4. What types of materials and equipment are used to achieve the desired results?
5. How does one know when the pupils have learned what they have been taught?
6. Does the program pick up the pupil where he is and move him in the direction of the stated objectives?
7. Is there a positive and significant correlation between the curriculum provided by the school for the mentally retarded pupils and the actual demands placed on these pupils by society and the world of work?
8. Are the services of a supervisor who is qualified in the area of mental retardation available to the teachers, and is the time he is available proportionate to the needs of the program?
9. Are the necessary psychological services available to the program, and are they being used appropriately?
10. Are the physical facilities comparable in quality to the facilities available to the regular pupils, and do these facilities reflect the needs and stated objectives of the mentally retarded pupils?

Mandated Evaluation of Educators

Legislation enacted in 1971 has resulted in the revision of the California Education Code and a focus on the evaluation needs of California public schools. This legislation requires each school district to develop and implement specific guidelines for the evaluation of the performance of certificated school personnel. Also in 1971 the California Legislature passed and the Governor signed into law the Stull Act, which requires the State Board of Education to develop and disseminate guidelines that may be used by school districts in the development of procedures for the evaluation of certificated personnel. The effects of the new legislation can be summarized as follows:

1. Uniform evaluation procedures have been established to determine the competencies of all certificated personnel. Employees who do not meet established performance standards are reassigned.
2. Instructional competencies of personnel are being upgraded.
3. Instructional personnel are involved in the development of teaching standards.
4. Instructional programs are defined by the local school district.
5. All educational personnel are routinely evaluated.

The comprehensive evaluation of personnel would include the assessment of the efficiency and the effectiveness not only of the teacher and the teacher aide but also of all supervisory personnel, including the school principal, consultants, and other administrative personnel. Such an evaluation requires that the job descriptions or responsibilities of all personnel be clearly delineated so that the evaluator can determine whether or not the behavior of the personnel conforms to the expected performance.

Pupil Evaluation and Reporting

Learning is revealed through changes in behavior. All pupils, including the mentally retarded, should know how they are progressing and how they stand in relation to pupils of comparable ability. In addition, the retarded pupils need to develop attitudes, abilities, and skills that will prepare them to cope with the problem of ultimately being evaluated by the adult community.

An evaluation program, if it is to be effective, must be a continual process consistent with the program objectives and curriculum content. To evaluate mentally retarded pupils with an instrument that is designed to measure the achievement of normal pupils is often unrealistic. Persons concerned with evaluating mentally retarded children should be alert to the hazards and weaknesses of basing their evaluation on the pupils' written work. The oral or demonstration method is frequently more effective. This is particularly true of the skills of daily living. Pupils can demonstrate or tell how to use a labor-saving device, iron a shirt, make a cake, plan a budget, fill out printed forms, or use selected tools. Other activities, such as reporting an individual project to the class, describing a field trip, outlining safety rules, and describing home economics or shop procedures, can be evaluated efficiently when pupils describe the process orally.

In the development and selection of techniques for evaluating the progress of mentally retarded children, the following points should be considered:

1. Techniques must objectively evaluate the skill that has been taught. The framework used in evaluating a skill must parallel the framework used by the teacher in developing the skill.
2. Techniques must reflect the vocabulary level of the pupils and must be developed in such a way that pupils clearly understand what is expected of them.
3. Techniques must reveal progressive levels of achievement consistent with the various levels of ability.
4. Techniques must reveal the ability of the pupils to use information meaningfully.
5. Techniques must determine the degree to which the curriculum content and the method of instruction are consistent with the achievement level of the pupils.

The method of reporting progress of mentally retarded pupils should be in harmony with the school district's basic principles and policies of reporting progress for all children. When specific methods and procedures for reporting progress of mentally retarded pupils are being developed, the following points should be considered:

1. Areas of strength and weakness should be indicated on the report form adopted. In addition to course titles, the report should include such items as: "following directions," "completing tasks," "participating in group activities," and the like. The report should be designed so that a year-to-year comparison of its information will reveal the pupil's development and progress.
2. Course titles printed on the report should be carefully considered in order that the report will not mislead the pupil, the parents, or members of the community. Mentally retarded pupils do not study the same English, mathematics, social sciences, and the like, as do regular pupils. They study practical English, vocational English, or conversational English. An *A* or other mark of achievement in practical English will not be confused with an *A* given to a student enrolled in a college preparatory English course.
3. The same policies and procedures regarding the range of grades (*A*,*B*,*C*, or Satisfactory, Unsatisfactory) used for regular pupils should be used for mentally retarded pupils. Grades for the latter, however, should be given on the basis of demonstrated ability and effort in relation to entry skills and rate of learning.
4. Student and parent conferences should be scheduled to supplement the reports and to discuss with the parent the pupil's program and progress. These conferences are vital in securing home-school cooperation for the benefit of the pupil and his educational program.

Chapter 4

Characteristics and Learning Styles of the Educable Mentally Retarded

The professional literature on the characteristics and learning styles of the educable mentally retarded is not without areas of controversy; however, when an operational program is being developed to provide services for the mentally retarded, certain positions must be taken.

Hard empirical evidence that would resolve some of the present controversies may never be available to professionals in the field. Issues that have been controversial may well remain so for many years. Therefore, in deriving interpretations from the available data, the following guidelines will be used:

1. If evidence appears to give increasing support to a controversial area, that area receiving such support will be considered.
2. If the evidence is unequivocal, it will be accepted as a basis for action.
3. If a controversial area suggests alternative approaches, and if each of the alternative approaches appears to have equal support, then the approach that promises the highest results for the educable mentally retarded pupils will be selected.

Many of the studies that have been reviewed relate to specific factors of learning rather than general applications. However, because retarded pupils will continue to need improved services, attempts will be made to state implications that may be generalized for a classroom environment.

Similarities and Differences

A significant problem for those who teach educable mentally retarded pupils is the identification of those characteristics that educationally set the retarded pupils apart from their nonretarded peers. Attention needs to be directed to the determination of how the retarded act and think and to the identification of those educationally relevant attributes that separate the retarded from their associates and friends who are not retarded. Moreover, those social, emotional, and educational areas in which the retarded are essentially similar to their peers must be clarified.

Retardation cannot be simply described. The term *mental retardation* implies a central defect that is assumed to affect behavior, and somehow it suggests that the retarded are unique. Such a position is too simplistic. Goldstein (44) has suggested that the observed qualities of "differentness" and "sameness" are more a matter of degree than of kind. The retarded do not share a common condition produced by a specifiable disorder; instead, over 100 causes of mental retardation have been identified with several clusters of behavior associated with particular causes.

Retardation may be associated with a specific genetic disorder, such as Down's syndrome or moderate to severe physical and cognitive dysfunction. The condition can more frequently be associated with intellectual abilities, unless one chooses to speculate about innumerable social and cultural factors. Just as there are no two individuals who are alike, no two retarded individuals are just alike.

Most mentally retarded individuals have the same array of physical, social, and emotional needs as the nonretarded, but the retarded tend to exhibit an excess of deficits in their developmental characteristics (93). Many retarded pupils are less adequate in effectively dealing with self and with their environment. It generally can be predicted that the retarded individual's cognitive skills and needs will be closest to his mental age; his physical characteristics and needs will be closest to his chronological age; and his social and emotional characteristics will be somewhere between his mental age and his chronological age. Kirk (58) states that the exceptional child, because of discrepancies in his own growth characteristics, will require certain adaptations of educational practices.

Mentally retarded and normal pupils can be expected to give similar responses, qualitatively and even quantitatively, to many variations in their environment. Ellis, Pryer, and Barnett (31) have demonstrated that the learning of normal and retarded individuals can be described by using essentially the same mathematical equations.

Evidence exists, however, that learning among retarded and normal individuals of the same mental age may be qualitatively different. Girardeau (43) reports that mentally retarded pupils are significantly inferior in their ability to form learning sets. Results of studies by Baumeister, Beedle, and Hawkins (9) indicate that retarded individuals are relatively disadvantaged in ability to learn a response when discrimination is difficult.

In two studies Thompson and Magaret (101, 69) utilized the Stanford-Binet test to compare the performance of normal and retarded pupils of the same mental age. The retarded pupils had difficulties with those problems that required rote memorization. They also did poorer in areas that required a verbal response or presentation. This coincides with a discovery by Baumeister (6) that the retarded are generally more deficient in verbal than in performance abilities. The factor analytic techniques used in studies by Baumeister and Bartlett (7) and Baumeister, Bartlett, and Hawkins (8) have shown that the structure of abilities measured by the *Wechsler Intelligence Scale for Children* may differ for normal and retarded individuals. Both the normal and retarded pupils in these studies were delineated by general ability as well as verbal and performance abilities; however, the authors labeled a fourth emergent factor "concentration" or "stimulus trace." Certain items, such as the digit span, require memory of specific stimulus events; the retarded pupil may possess less aptitude for this item than the normal pupil. Similar results with the *Wechsler Adult Intelligence Scale* have been reported by Sprague and Quay (94).

Gallagher and Lucito (41) have found the retarded to be relatively weak in tests of attention that require comprehension and concept formation. A similar conclusion was made by Burt (16) after his studies with British children; he found the retarded to be defective in tests of reasoning, memory, and attention.

Curriculum Implications

In building a curriculum for the retarded child, planners must solve the problem of delivering an instructional program to children who take longer to acquire skills, who are inefficient in processing information, who easily acquire poor and cumbersome learning habits, and who often are not ready for formal instruction. The problem seems basically to be a matter of what to teach and how to teach it. According to Smith (93), instructional planning for the young retarded pupil can be accomplished by: (a) considering the kind of environment that will facilitate the development of skills in the most efficient and effective manner possible; and (b) identifying the array of skills that the pupil needs to be able to perform at some minimal level in an early educational program. Smith concludes that the objectives of an early childhood curriculum should be as follows:

1. Offer the pupil experiences that will prepare him to receive and process subsequent instruction.
2. Motivate the pupil to see learning as worthwhile or fun.
3. Provide a program of activities that is sequential and capable of being modified to the pupil's needs.
4. Provide ways for the pupil to develop skills in using the environment to deal with his problems.

5. Expand and refine the pupil's repertoire of skills.
6. Enable the pupil to acquire learning skills.

The characteristics of the curriculum primarily refer to the process involved in changing the behavior of the mentally retarded pupil. Behavioral outcomes may be related both to the process used in the classroom and the specific curricular objectives being taught. Although the preceding six process-type objectives were described as being appropriate for the development of a curriculum at the primary level, their relevance is continuous throughout the school program.

Language and Communication Research

The research cited in the following paragraphs indicates that the language and communication curriculum for the educable mentally retarded should provide the following:

1. A comprehensive early intervention program designed to utilize the critical period for language acquisition
2. A situational life experience approach to language development rather than the traditional speech therapy program
3. An emphasis on training in auditory and visual discrimination
4. The use of behavior modification strategies in language development programs
5. An emphasis on training in the use of mediational strategies and extensive practice in their use
6. An approach to remediating restrictive language styles

Karlin and Strazzulla (56) and Carmichael (70) note that retarded pupils follow language developmental patterns that are similar to those of normal pupils but are markedly delayed. Present programs for the educable mentally retarded generally begin about the age of six to eight years. If there is, in fact, a critical period before the age of three or four years for language acquisition to occur, it is conceivable that the delay may be due as much to lack of appropriate language stimulation and reinforcement as to mental retardation (74, 18). The need for early educational planning is critical, not only to make the best use of a particular developmental sensitivity period, but also to prevent the language deficit that often becomes a "secondary characteristic" of the educable mentally retarded.

A review of research on intervention programs that are based on traditional speech therapy indicates that this approach has not generally produced significant gains in the language skills of retarded pupils (97, 55, 65). The more comprehensive language programs have tended to show positive gains (89, 75). A broader interpretation of language would include training in auditory skills and experience-oriented language activities that are personally meaningful to the retarded individual. Before any language program can succeed, the pupil's use of language must be motivated (102, 56). The situational life experience provides this motivation. Emphasis on speech correction might best be delayed until the individual has something he wants to say (79, 72, 12).

An individual's interactions with the objects, events, and persons in his environment are for the most part sensorimotor experiences. Language is a vehicle that serves to organize and explain these experiences. Studies have indicated that the retarded perform poorly when they are given tasks that require discrimination. House (49) states that when grossly distinctive cues are used, learning is facilitated. Strazzulla (96) suggests that the retarded should be given sequential training in the analysis of sensory input in conjunction with appropriate language. This concerted effort to coordinate sensory and linguistic behaviors should enhance both processes.

Auditory skills are crucial to language acquisition, and therein lies a directive for educational planning. Discrimination of sounds that are part of the individual's environment should be a focus for training–moving from gross to discrete discriminations.

The success achieved in behavior modification research with severely involved retarded pupils indicates a promising direction for educators. Most research has dealt with isolated symbol or word production rather than with connected, natural language (62, 67). The strategies and theory of operant conditioning seem to be effective, and they offer promise in the area of motivation for improved language effort (13). Ezell (33) states that less tangible social reinforcers–attention, praise, expansion, and imitation of language–have proved effective as have more tangible token reinforcements. Operant procedures, if they are effective in gaining the pupil's attention, should become a part of daily classroom routine and planning.

Verbal mediation, one form of pretraining, facilitates discrimination by helping the retarded pupil to abstract unique qualities out of stimuli by relating them to a distinguishing label (78). Verbal mediation, in sentence form, has greater effectiveness than just naming or labeling. If these mediational devices are supplied by the teacher, the educable mentally retarded can effectively use them. The retarded are capable of generating their own mediating sentences, but they appear unable to independently elicit them for learning (68). Although retarded individuals can spontaneously generate mediators in a given task, they often cannot use them to solve the task. Luria (66) concludes that the retarded seem to be deficient in the instrumental or directive use of verbal mediation. The results of studies by MacMillan (68), Jensen and Rohwer (53), and Ross (88) indicate that training in the use of mediational strategies is not in itself sufficient; however, the training is highly effective when it is accompanied by intensive practice in the use of those strategies.

The retarded individual's learning appears to be distinctly affected by the meaningfulness of the material to be learned. When the retarded are taught to apply distinctive mediating cue labels, their discriminative and associative learning performance improves (20, 92). Thus, meaningful material should be used whenever possible. When new material is being presented, the retarded should be given every opportunity to apply mediators to the material. Educators might do well to provide a training program in which strategy and practice are combined.

Some individuals from the lower socioeconomic strata exhibit a form of speech Bernstein (12) called "public language," a speech form that ". . . discourages the speaker from verbally elaborating subjective intent and progressively orients him to descriptive rather than analytic concepts." Individuals who have been labeled "disadvantaged" or "retarded" often possess a restrictive language style that interferes with academic learning (12, 10, 14).

Rather than stress the more traditional concerns for the "Three Rs," the educational milieu should help the educable mentally retarded to think in terms of ideation. This need is especially relevant for the individual who, when seeking employment, has to present himself as an articulate and organized person able to enlarge on a given question. Limited verbal ability, which may be interpreted by an employer as a poor self-concept or an indifferent attitude, may prevent the educable mentally retarded from securing or sustaining gainful employment. The curriculum therefore must provide experiences that will develop expressive language and communicative competencies that will promote the psychological and social growth of individuals whose present use of language is inadequate in vocational or social settings.

Most currently used language assessment scales measure speech and articulation deficits (79), syntactical level, extent of vocabulary, and verbal output (90). A need exists for an objective measurement of natural expressive language in terms of the individual's life-style, needs, and abilities. Ideational content and level might be better indicators of language ability than sentence length. These indicators could, in turn, provide direction to the educator in the areas of conceptual-linguistic learning tasks. A language program for the educable mentally retarded pupils should strive to coordinate cognitive and linguistic learning.

The findings of the language and communication research discussed in the preceding paragraphs indicate that there is a need for an early intervention program that would be based on a coordination of cognitive and linguistic developmental sequences. Motivation, stimulation, and reinforcement of verbal efforts of the child must begin early and be continued throughout childhood.

Motivational and Social Deprivation Research

Educable mentally retarded pupils generally are motivated to interact with adults, and their persistence at tasks can be extended or intensified by supportive verbal statements and attention to their activities (106, 45). Compliance and cooperation are evoked from many retarded pupils when the effect of such compliance or cooperation is to increase or maintain the social interaction with the teacher or other adult.

Reinforcement facilitates the learning rate. Baumeister (5) states that the individual is able to learn faster when reward follows response and when associations to be formed are familiar ones. Adult approval that is based upon positive interaction is reinforcing to the retarded pupil and can elicit increased performance from him (108).

Although positive reinforcement generally has a facilitating effect on performance, some retarded pupils exhibit an initial reluctance to interact with adults. Positive or negative reaction tendencies are believed to be related to the amount of satisfaction the retarded achieve in their contacts with adults (11). Persons who have experienced aversive or punishing contacts exhibit a negative reaction tendency, and persons who have had supportive and friendly contacts exhibit a positive reaction tendency. Social deprivation generally tends to produce both high positive and high negative reaction tendencies (107). Applications of these results must involve an evaluation of the personal history of the individual.

Instructional planning and arrangement of activities should permit management of the degree of verbal and physical interaction between the teacher and pupils. Activities that preclude interaction with the teacher or peers can often be useful in teaching specific skills to the educable mentally retarded; however, curriculum planners should emphasize activities that provide opportunities for social interaction and generalized social reinforcement. A pupil's need for adult attention should be included as a variable when planning curricular activities. The influence of adult-produced "failure" or "success" regarding pupil performance should be a factor incorporated into the planning of motivational strategies.

Discrimination Learning Research

The implications based upon the results of research in the area of discrimination learning are that planners of a curriculum for the educable mentally retarded should do the following:

1. Arrange tasks to be learned in an ascending order of difficulty.
2. Establish increments between the ascending sequential steps at a level that will facilitate successful progression.
3. Utilize the stimulus value of teaching materials to maximize their potential for directing and maintaining the learner's attention.

A vital factor in most learning situations is the achievement of success. Many educable mentally retarded individuals have experienced repeated failure. The degree to which they achieve success can be enhanced if the tasks to be learned are in an ascending order of difficulty. The "easy-to-difficult" sequence should help the pupil avoid the failure syndrome or the "failure set" described by Zeaman and House (105).

House and Zeaman (50) imply that intelligence is not as highly related to solving a visual discrimination problem as is the factor of attention. They conclude that the retarded pupil is weak in directing and maintaining his attention rather than in learning per se.

Milgram and Furth (77) discuss the presentation of objects in their own depth dimension of space for improved performance. When the retarded pupil is required to distinguish nonverbally between two stimuli (such as similar events, objects, or patterns), he learns slowly; and learning will probably apply only to the particular stimuli used. The thoughts and actions of the retarded are concrete; events and objects derive meaning from the current situation. Abstractions such as construction of groups, which are dependent upon the relations of individual objects, are difficult for the retarded. Homogeneous materials are easier for the retarded individual to comprehend than are heterogeneous materials (42).

Multisensory Learning Approach

Some retarded pupils may have difficulty in perceiving their surroundings and consistently responding to the visual world about them. An approach should be devised that will use all of their sensory modalities (2). Pestalozzi, Froebel, Montessori, and Fernald have developed a teaching rationale based upon perceptual and multimodality learning. Fuld (39, p. 254) has concluded that "... the underlying process being stimulated by the combination of visual and verbal auditory input ... is a single mental process that may be experienced as visual, auditory, and/or kinesthetic (including verbal) imagery, depending upon the functional systems stimulated." Therefore, educational procedures should be based upon the use of more than one sense modality (including tactile perception), as in the Montessori and kinesthetic approaches.

Fernald and others (35, 59, 87) have reported that some of the nonreaders referred for remedial reading services learned to read rapidly when they were required to trace the words with finger contact and later to write the words from memory. Methods of instruction based upon tactile perception seem to improve the rate of learning more than some of the other methods of instruction that are used in teaching the educable mentally retarded to read.

Piaget's developmental theory of intellectual growth suggests that what is seen in the behavior of a retarded child is his frustrated attempt to build acts of intelligence in a body that is not yet free of the demands of the sensorimotor period (104). Kodman (60) points out that even though the retarded may not have a deficit in sensory input, they seem incapable of integrating and utilizing the input in an economical manner.

The preceding discussion implies that sensory input must be controlled to match a rate at which it can be decoded and assimilated. If the cognitive processes develop more slowly and to a lesser degree in retarded pupils, then these pupils must rely more fully on the sensorimotor and perceptual abilities that are developed during early childhood (38).

Developmental Approach

The major curriculum implications of a developmental approach to the education of the mentally retarded are related to the assessment of developmental level, the sequence and structure of content, and the teaching strategy. The fundamental implication for the education of all pupils rests on the idea that the educational process can be viewed as guiding individuals through stages of development, providing them with the appropriate organization of subject matter, and introducing them to information at the appropriate time and in the appropriate manner (91). Before any of the preceding steps in the educational process can be taken, however, the individual's learning behavior or developmental readiness must be identified and analyzed. Working within this theoretical approach, the teacher is in a position to specify the level at which the pupils are functioning and subsequently to match curricular content with the mode of instruction.

Two examples of curriculum implications are: (a) discrimination of objects as a prerequisite to number concepts and recognition of the symbolic representation of numbers; and (b) evidence of ability to conceptualize the conservation of mass (the transformation of a large object to smaller objects, totaling the same mass as the large object) before introducing activities such as those involving fractional concepts, volume, and equivalencies in measure. Additional examples of the application of Piagetian principles may be found in the works of Frost (37) and Sigel (91).

The theoretical concept of development described by Piaget has perhaps the greatest relevance for education. Because Piaget's experiments seek to interpret behavior rather than to note success or failure, his technique permits study of a wide range of observed performance. The stages of intellectual development postulated by Piaget form an ordinal-type developmental scale in which achievement occurs at a certain stage only if there has been successful achievement at preceding levels (95).

Knowledge of the sequence of stages and their behavioral indices, as expressed in language and thought, provides the educator with criteria upon which to gauge the readiness of the pupil to assimilate material and aids in the determination of curriculum sequence (91). Ausubel (3, p. 112) has noted that recognition of the principle of readiness implies ". . . that pupils acquire readiness for each unit of subject matter as a result of mastering the preceding sequentially related unit."

Guidelines for sequential structuring of learning hierarchies and educational objectives have been developed by Gagné (40) and Bloom (99). A school program capable of true development rather than haphazard change must incorporate well-defined instructional objectives and methodology in order that effectiveness of individual activities and units can be accurately assessed.

The teacher must recognize that learning is more efficient and effective when the presentation of material is appropriate to the pupil's level of development. The mode and manner of presentation of learning materials and experiences are the major implications of the developmental approach.

Characteristics Related to Employability

Many of the early studies of graduates of programs for the educable mentally retarded indicated that more than 60 percent were employable as adults (34, 15, 86, 28). The results of recent studies indicate that about 80 percent of the graduates are employable. Much of the current literature indicates that, within the limits used to define the population, mental age is not a factor in determining whether the educable mentally retarded are employable or not. The present concept and diagnosis of retardation may be inappropriate in terms of predicting future vocational adjustment. Criteria currently being used to diagnose retardation may be useful in predicting problems an individual may have while in school, but additional criteria are needed if one is interested in making predictions concerning the individual's employability after he leaves school.

Many investigators make statements in regard to the importance of desirable personal characteristics and social skills as factors related to the employability of the adult retarded. Skills that are needed by a factory production worker may not be the skills needed by a service station attendant who has direct contact with the public. However, it is reasonable to assume that a considerable overlap would exist. A composite of skills that rate high in potential for employability is presented in Table 3. The information listed comes from employer interviews or, in a few cases, from observations made by the individual investigators. Some of the characteristics identified by the investigators have been rephrased, and similar skills have been pooled in order to reduce the total number.

TABLE 3
Skills Needed for Successful Employment

Skill	*Porter (86)**	*Dinger (28)***	*Abel (1)*	*Kolstoe (61)*	*Cassidy (21)*	*Coakley (24)*	*Engel (32)*	*Michael-Smith (76)*
Ability to stick to job; punctuality	1	x	x		x	x	x	x
Dependability	2	x	x	x	x	x	x	x
Honesty	3						x	
Getting along with fellow workers	4	x		x	x	x	x	x
Cleanliness; neat appearance		x		x	x	x	x	x
Ability to follow directions		x						x
Intelligence			x					
Ability to accept criticism					x		x	
Physical strength								x
Flexibility and obedience								x
Efficient use of hand tools			x					x
Personal independence			x					x

*Listed in order of importance (from employer interviews).

**Two-thirds of those employed were rated high on these traits by employers.

Collman and Newlyn (25) interviewed employers to determine the causes of employee failures. The main reasons given for discharge from the job were the following: (a) character defects (unreliability on the job, tardiness, sex offenses, theft, rudeness, and laziness) in 59 percent of the cases; (b) inefficiency in 24 percent of the cases; and (c) temperament instability in 17 percent of the cases.

The Relationship of IQ to Employability

McIntosh (73) reports that of 1,000 graduates of one school 65.2 percent were in the IQ range of 66-80. Only 2.2 percent of this group were unemployed when McIntosh secured his data in 1947. A total of 52 in the group had IQs below 60, and of this group 13.5 percent were unemployed. He found little or no difference in work records of the 71-75 IQ group and of the 76-85 IQ group in regard to wages earned and length of time on the job. McIntosh concludes that the worker's emotional stability and ambition seem to be related to the amount of wages he earns.

In another study Coakley (24) concludes that mental age does not seem to be the primary determinant of an individual's success on a job.

On the basis of the results of his investigation, Bobroff (15) reports a low positive relationship between income and IQ and between income and academic achievement. Studies by Dinger (28) indicate correlations of 0.21 between wages and IQ and 0.29 between wages and chronological age.

Curriculum Planning

The mentally retarded do not usually remain in high school until age twenty-one, and very few services are available to them after graduation. The total educational program should lead to the development of the retarded individual's maximum potential when he completes his high school career. Deno (27) states that the overall goal of any special education program should be to develop maximum self-sufficiency in each pupil.

Barnett (4) indicates that in developing a curriculum for the mentally retarded the emphasis should be on communicative skills, pretraining in job skills, and development of the personality traits that will help the pupil to become a contributing member of his community.

The development of school policy toward problem pupils has been traced by Kolstoe and Frey (63) from that of a stopgap approach to keeping the pupils "happy," to crafts, and finally to the remedial-academic approach. None of these approaches seems appropriate for the mentally retarded.

Switzer (98) notes that wherever the mentally retarded have been given a remedial-academic or a crafts curriculum, the dropout rates have been high and graduates have not been prepared for independent living.

An appropriate question is why have schools depended on a remedial-academic program to educate the mentally retarded. The answer might be that many educators have not been cognizant of other types of programs.

In a 1961 study Kolstoe attempted to determine the characteristics that discriminate between employed and unemployed male retardates. He found no relationship between academic achievement in school and success in employment. The characteristics exhibited by the employed (but not the unemployed) group were being cheerful, being cooperative, minding one's own business, being on time, understanding one's work, doing quality work, and showing initiative.

A study by Bobroff (15) of the economic adjustment of former special education students indicates that differences in test scores do not correspond to subsequent differences in learning. Bobroff concludes that the most important factors in economic adjustment are social qualities such as self-concept, promptness, and honesty.

In 1961 Dinger (28) interviewed parents of 100 pupils and asked for suggestions to improve the special education curriculum. All the comments he received pertained to areas of "life functions" such as cooking, sewing, shopping, and the like.

An investigation by Keeler (57) has indicated that job success is related more to the ability to interpret and follow verbal directions than to the ability to perform academically.

Some important values of the work experience program have been noted by Murphy (80). One of these values is concerned with the pupil's self-concept. The fact that he is able to *do* the job adds to his self-esteem and self-assurance. Murphy concludes that values such as following directions, knowing when to ask questions, and being prompt are the work habits that a special program can foster.

Kolstoe and Frey (63) have described a sequential program consisting of prevocational training, vocational adjustment or work tryout, and placement. Both study and work aspects of their program follow the same curricular outline. Because the retarded individual learns at a slower rate than the normal individual, there is no reason to believe that after four years of high school he will be ready for independent, competent living. More likely, he will need supervision and training for several more years. Kolstoe and Frey believe a student should be advanced to the job tryout or vocational adjustment phase of the program only after he has demonstrated the vocational, personal, and social skills he will need in a competitive work assignment. When he graduates from the program, the individual should be employable.

Howe (51) has reported on the results of an off-campus placement program. The purpose of Howe's study was to compare the success of the students who received off-campus work experience with those who did not receive such experience. When the final data were obtained, 86 percent of the experimental group and 84 percent of the control group were employed. Howe emphasizes that the study was conducted during a period of high employment and that most of the controls—the students who did not have work experience—had participated in on-campus work placement.

Chaffin (22) has described a curriculum that included a work experience program. The general approach consisted of a work-sample phase, a training-experience phase, and a job-placement phase. All the differences between the experimental group who participated in the work-study project and the control group who did not have a cooperative special education and vocational rehabilitation program were in favor of the experimental group. Of the students who were out of school, 95 percent of the experimental group and 70 percent of the control group were employed. The results of Chaffin's study indicate that a work experience program should first measure the limits and abilities demonstrated by the students with their work samples and then prescribe a deliberate plan to remediate any problems indicated by the evaluation.

Chapter 5

Instructional Models, Goals, and Objectives

The major goals of educational programs for the retarded may be stated in a variety of ways, but they usually include such elements as the improvement of learning opportunities, the development of individual potential, the enhancement of self-concept, the advancement toward becoming a self-sustaining citizen, and the attainment of employment potential. Although such a statement of goals may offer excellent broad guidelines for the education of the retarded, it does not provide the specifics that success demands.

Educational personnel who plan and implement successful programs must have more definitive strategies for delivering educational services to the retarded. A delivery system of educational services must be based on models that clearly define goals, objectives, evaluation procedures, teaching strategies, and administrative structure. This delivery system should encompass models that are sufficiently flexible to allow for the individual needs of the pupils, the teacher, and the school district. Models of education for retarded pupils in California are discussed from two perspectives: administrative models and teaching models. The presentation of goals and objectives follows the discussion of models.

Administrative Models

The California Education Code and the California Administrative Code, Title 5, Education, define the various administrative models that may be used to deliver educational services to the educable mentally retarded pupil. The models defined are special day classes, integrated programs of instruction, experimental programs, and special work-study programs. These models are described in the California Education Code as follows:

> *6902.2.* Programs for mentally retarded pupils identifiable pursuant to Education Code Section 6902.05.
>
> (a) Special day class (elementary and secondary). A class established for mentally retarded pupils (as defined by Section 6902.05). The class shall be maintained for at least the minimum school day. The class shall be taught by a full-time teacher whose responsibility is to teach pupils enrolled in the class

for the school day as established by the governing board for regular classes for pupils who are at the highest grade level in the special class.

(b) An integrated program of instruction. A program for mentally retarded pupils in which mentally retarded pupils, who are enrolled in a special day class taught by a teacher holding a valid credential to teach exceptional children, are integrated in regular classes in which the content and method of instruction have been modified to the extent that mentally retarded pupils can benefit from such integration. Such programs shall be conducted in accordance with the rules and regulations established by the State Board of Education.

6904.3. Experimental programs for mentally retarded pupils. Mentally retarded pupils who come within the provisions of Section 6902 or 6903 may be enrolled in experimental programs conducted by a school district or a county superintendent of schools. Experimental programs for such pupils shall be approved in advance by the Department of Education. The school district or county superintendent of schools conducting the experimental program shall be entitled to an apportionment equal to the amount which would have been credited to them had these pupils been enrolled full time in a special day class for the mentally retarded.

More specific directions concerning the program day for mentally retarded pupils are given in the California Administrative Code, Title 5, Education. Section 3405 of the California Administrative Code indicates that the program day for special classes for mentally retarded pupils should be, in length of time, the same as the program day for regular classes of pupils of similar chronological age in the school in which special classes are maintained.

The California Administrative Code, Title 5, Education, delineates specific directions for integrated programs of instruction and for experimental programs as follows:

3413. Integrated programs of instruction. An integrated program of instruction shall meet the following standards:

(a) The pupil's placement in such an integrated program has been recommended by the local admission committee.

(b) A regular class or classes in which he has ability to succeed is available and his attendance therein arranged in cooperation with the special class teacher.

(c) A pupil at the elementary level (comparable in chronological age to pupils enrolled in kindergarten through grade six of the regular class program) who participates in the program shall:

(1) Receive a minimum of 120 minutes of instruction under the immediate supervision of the special class teacher with the remainder of the program day under the general supervision of the special class teacher.

(2) Be provided with instructional material at his comprehension and computational level appropriate to the courses of instruction undertaken.

(3) Be assigned an evaluation for each regular class attended, such evaluation to be determined after consultation with the special class teacher.

(4) Receive, as a part of his annual case review, a report on his adjustment and achievement in the integrated program of instruction.

(5) Be referred to the local admission committee for its reconsideration of his placement in an integrated program of instruction in case of his repeated failure to adjust and succeed.

(d) A pupil at the secondary level (comparable in chronological age to pupils enrolled in grades seven through twelve of the regular class program) participating in the program shall:

(1) Receive a minimum of two class periods of 40 minutes each under the immediate supervision of the special class teacher, with the remainder of the program day under the general supervision of the special class teacher.

(2) Have the benefit of the provisions of subsections (c)(2) through (c)(5).

3500. Experimental programs; basis of approval. An experimental program for mentally retarded pupils authorized by Education Code Section 6904.3 shall be designed to develop, test, and demonstrate new instructional methods, program organizations, differential placement of pupils into programs, new curriculums, or other innovative designs.

An experimental program is not limited to the special class program of instruction or the integrated program of instruction. An experimental program design may deviate from any provision of this chapter.

Applications for approval of experimental programs must meet certain prescribed requirements, which are outlined in Section 3501 of the California Administrative Code, Title 5, Education.

The experimental program authorization could be used by school administrators who, with the approval of the State Department of Education, wish to further test the feasibility of programs such as the transition of educable mentally retarded pupils back into regular classes or the grouping of educable mentally retarded pupils with other types of handicapped pupils. Both of these programs have been operated in California under authorization of limited-term legislation (the transition and supplementary education programs), but additional experimentation may be justified to test other approaches or models.

Work-study programs, although they are discussed here as a separate type of administrative model, pervade each of the previously described models. The program for educable mentally retarded students, whether it is a special day class, an integrated program of instruction, or an experimental program, must include the elements of a work-study curriculum at the secondary level. This requirement is described in Section 3408(d) of the California Administrative Code, Title 5, Education, as follows:

> The instructional program for all such schools or classes shall be vocationally oriented and shall include work training opportunities at the high school level.

A work-study program is considered a special model when the school program is enhanced by differentiated scheduling or modification of the instructional day. This is authorized by California Administrative Code, Title 5, Education, Section 3407(d), (e), and (f) as follows:

> (d) The minimum instructional day for the last four years at the secondary level (comparable to grades nine through twelve of regular classes) or for a departmentalized junior high school shall be either one of the following:
>
> (1) A total of 240 minutes under the immediate supervision of a special class teacher with the remainder of the full-time instructional day under either the immediate or general supervision of a special class teacher.
>
> (2) With prior approval of the Superintendent of Public Instruction, 180 minutes under the immediate supervision of a special class teacher and the remainder of the full-time instructional day under either the immediate or general supervision of a special class teacher.
>
> (e) The minimum instructional day for the last year at the secondary level (comparable to grade twelve of the regular classes) shall be one of the following:
>
> (1) That described in (d) (1).
>
> (2) That described in (d) (2).
>
> (3) With prior approval of the Superintendent of Public Instruction, 120 minutes under the immediate supervision of a special class teacher with the remainder of the full-time instructional day under the general supervision of a special class teacher. This provision is designed to implement intensive work-study programs.
>
> (f) Requests for prior approval of the Superintendent of Public Instruction for (d) (2) and (e) (3) shall be submitted on forms prepared by the Department of Education. Approval must be granted prior to the initiation of the program and shall be effective as long as the program operates as approved. An annual report for the program operated under (d) (2) and (e) (3) shall be submitted to the Department of Education by July 15 of each year on forms prepared by the Department of Education.

The preceding regulations permit school districts to plan and implement intensive programs of on-the-job work experience. These programs are described in detail in the *Work-Study Handbook for Educable Mentally Retarded Minors Enrolled in High School Programs in California Public Schools* (19).

Teaching Models

Theoretically, any conceivable teaching model or instructional technique might be used with the authorized administrative models. To cite examples, a unit approach or a learning center approach could be used in a special day class, in an integrated program of instruction, in an experimental program, or in a special work-study program; however, a successful plan for the effective delivery of educational services to the retarded is one that is directed by goals and objectives rather than by administrative or instructional models. The most effective method of delivery of services can be selected only after the goals and objectives have been carefully determined.

The goals and objectives for the education of the mentally retarded should have the following characteristics:

1. The program should be pupil-oriented rather than teacher-oriented.
2. The pupil's performance should be based on achievement that can be documented and on criteria to which accountability can be applied.
3. The program should be a part of an overall school district plan that includes all elements of a comprehensive planning and budgeting system.

When program planning techniques are applied, the emphasis should be placed on student accomplishment. The use of administrative and teaching models should be considered only as a means to an end.

Program Planning for the Retarded

Effective delivery of services to the retarded can best be accomplished through systematic planning and program development. Such a system includes the following functions:

- Identification of community and pupil needs
- Formal definition of district goals, objectives, and priorities
- Arrangement of activities into programs directed toward the achievement of goals and objectives
- Utilization of analytical techniques to choose among alternative programs
- Allocation of resources to programs
- Evaluation of school district activities by assessing the degree to which objectives are accomplished (83, p. 2)

These functions are described in subsequent sections of this chapter.

Assessment of Needs

In the planning of a local program, school district personnel should use available resources to assess their needs. Needs equal the difference between what should be and what is. The identified needs of the program serve as the basis for planning and programming. The identification of needs involves the analysis of all pertinent evaluative data such as achievement records, observed pupil performance, and pupil requests for program changes. Teachers, administrators, parents, and community representatives should be involved in identifying these needs and in establishing goals that will meet the needs.

Age-Span Goals for the Educable Mentally Retarded

Establishing goals for programs for the educable mentally retarded is by no means a new process. Innumerable curriculum guides, state guidelines, courses of study, and methods textbooks have devoted uncounted pages to the goal-setting process. The goals proposed here are part of a carefully designed sequence of planning and programming. Even though the concept that certain curriculum areas are applicable for pupils of all ages is not new, this concept should provide a sequential development of curriculum experiences based on stated behavioral objectives. Within general areas, goals are developmental according to the age of the pupil. The goals delineated are in some cases beyond the expectancy of many retarded pupils assigned to special education programs.

Elementary level. The goal for an elementary level (approximate age: six through nine) program should be to provide the pupils with learning opportunities that will:

1. Develop readiness for communicative and quantitative skills.
2. Promote the development of oral language.
3. Help the pupil gain an understanding of self and others.
4. Develop attitudes and skills related to getting along in the peer group and in the family.
5. Develop self-care skills and the ability to be a contributing member of the family.
6. Enhance the pupil's ability to understand and follow directions.
7. Promote the development of good manners.
8. Develop good health habits, proper grooming, and participation in a variety of leisure-time pursuits.
9. Enable the pupils to express themselves through music, art, and drama.

10. Develop independence and the ability to function safely within the school and the neighborhood.
11. Lead to the development of skills in working with money and with the concepts of measurement.
12. Lead to an understanding of the physical environment and how people change the environment or adapt to it.

Intermediate level. The goal for an intermediate level (approximate age: ten through fourteen) program should be to provide the pupils with learning opportunities that will:

1. Develop knowledge and skills in the basic tool subjects.
2. Contribute to the ability to communicate, verbally and in writing, with others.
3. Lead to an understanding of one's physical, social, and emotional development.
4. Develop attitudes and skills related to getting along in the peer group, in the family, and in the expanding community.
5. Lead to independence in the daily living of a preadolescent.
6. Enhance the pupil's ability to follow directions that are increasingly complex.
7. Develop understanding and habits related to the social skills.
8. Develop good health habits, proper grooming, and participation in a variety of leisure-time activities.
9. Enable the pupils to express themselves through music, art, and drama; and to understand and appreciate the contributions of others.
10. Develop independence and the ability to function safely within the school, the neighborhood, and the community.
11. Lead to the ability to manage money and to use the tools of measurement in the solution of problems encountered by the preadolescent in daily living.
12. Lead to an understanding of how people adapt to the physical environment.
13. Enable the pupils to study and explore potential occupations.
14. Encourage pupils to become familiar with the responsibilities of adults and to progress toward acceptance of these responsibilities.
15. Involve pupils in vocational education or industrial studies with the intent of developing occupational and leisure-time skills.
16. Develop positive attitudes toward family responsibilities and toward the world of work.

Secondary level. The goal for a secondary level (approximate age: fifteen through eighteen) program should be to provide the students with learning opportunities that will:

1. Develop the ability of the students to apply to their daily living experiences the skills they have learned in the basic tool subjects.
2. Enable students to communicate effectively in dealing with adults, in applying for and holding jobs, and in performing the responsibilities of an independent citizen.
3. Lead to an understanding of physical, social, and emotional development in children, in youth, and in adults.
4. Develop the attitudes and skills related to getting along in the peer group, in the family (as a child and as a parent), and in the community.
5. Lead to independence in the daily living of the adolescent and the young adults.
6. Enhance the student's ability to follow directions provided by laws and regulations, by teachers, by other adults, and by employers.
7. Develop the skills needed to be accepted in normal social situations.
8. Develop habits that promote good health, proper grooming, and the wise use of leisure time.
9. Enable the students to express themselves through music, art, and drama; and to understand and appreciate the contributions of others.
10. Develop independence and the ability to travel and to function safely within the school, the neighborhood, the community, and the expanding environment.
11. Lead to the ability to manage money and to use the tools of measurement in planning for the future and in solving the problems encountered by youth and by adults in daily living.
12. Lead to an understanding of the physical environment and to the developing of habits that will preserve and protect the environment.
13. Involve students in occupational education, occupational exploration, and work-study experiences both in school and in the community.
14. Prepare students for acceptance of adult roles.
15. Involve students in vocational education or industrial studies to develop their occupational and leisure-time skills.
16. Enable students to become adequate members of a family and to prepare for the role of husband/wife and parent.

17. Prepare students to become responsible, productive, and participating members of their school, their family, and their community.

Life-Span Goals for the Educable Mentally Retarded

An adult education program for educable mentally retarded individuals is not required, but existing laws and regulations permit school districts to provide continuing education for these individuals. When districts operate adult education programs for the retarded, goals should be developed that are an extension of the secondary program goals. These goals should emphasize the development of basic skills, occupational preparation, development of social competencies, and preparation for independent living.

Developing Curriculum Goals

As previously stated, program planning and implementation involve the sequential development of goals and objectives. This concept of sequential development has been followed from the general goals for the school district to the goals for educable mentally retarded programs at each age-span level. The next step is to develop goals in the curriculum areas. These curriculum goals are specific and are product-oriented. They indicate the types of behavior or performance that are to be expected of the pupils, and they serve as the basis for curriculum development at the local school level.

Ten curriculum areas have been selected to serve as the general areas for the development of goals. These areas encompass skills related to the following:

1. Fostering personal and social growth
2. Maintaining health
3. Communicating ideas
4. Using money
5. Working with measurement
6. Getting along in an expanding community
7. Coping with the physical environment
8. Maintaining a home
9. Using leisure time
10. Developing career potential

Many goals pervade all age-span levels. Therefore, the goal statements presented here are not subdivided by elementary (E), intermediate (I), and secondary (S) levels; however, they are coded to indicate at which levels emphasis should be given.

1.0 Skills Related to Personal and Social Growth

To advance his personal and social growth, a pupil should be able to do the following:

1.1 Demonstrate acceptable behavior in coping with stress and in establishing a realistic self-concept. (E, I, S)
1.2 Identify and use the process of critical thinking as related to intellectual skills. (I, S)
1.3 Explain the value of mutual respect and the value of sharing, giving, and receiving in the family. (E, I, S)
1.4 Accept and resolve personal and peer differences and rights. (E, I, S)
1.5 Exhibit appropriate attitude, behavior, responsibility, and role of each sex. (I, S)
1.6 Realize the employer's vocational needs and goals, and describe the worker's role in achieving them. (S)
1.7 Exhibit pride in self as a loyal and respected citizen functioning within a good personal-community value code. (I, S)
1.8 Practice tolerance and consideration through the awareness of race and ethnic group likenesses and differences. (E, I, S)

2.0 Skills Related to Maintaining Health

To maintain his health, a pupil should be able to do the following:

2.1 Use good nutritional concepts for proper diet, food preparation, and cost management. (E, I, S)
2.2 Discuss the major body systems and their functions. (I, S)
2.3 Plan rest, relaxation, and sleep time wisely for basic health needs. (E, I, S)
2.4 Illustrate the importance of cleanliness and care in the total health program. (E, I, S)
2.5 Relate physical fitness to exercise, job opportunities, and survival. (I, S)
2.6 Identify the various types of drugs, possible harmful effects, and availability of treatment for drug addicts; and recognize that laws are passed to protect and help people. (I, S)
2.7 Locate services available from county health agencies; i.e., clinics, public health nurse, public welfare, water, and sanitation. (S)
2.8 Identify communicable diseases and the methods of prevention and control of these diseases. (E, I, S)
2.9 Explain procedures in basic first aid, and compile a list of persons to be notified in case of emergency. (I, S)

2.10 Verbalize basic mental health needs of people for love, independence, and a sense of usefulness; and locate mental health facilities. (I, S)

2.11 Describe values of medical and dental examinations; and relate prevention of illness to proper diet, exercise, cleanliness, and sanitation. (E, I, S)

2.12 Identify individual and family needs for health and accident insurance, and describe methods of obtaining insurance. (S)

2.13 Name the stages of human development; and identify the factors to be considered in the selection of a mate, the responsibilities of the family unit, and the legal aspects of marriage and divorce. (S)

2.14 Locate medical and dental facilities, and describe procedures for obtaining emergency medical services. (S)

2.15 Explain legal, sociological, physiological, and psychological factors of alcoholism; and identify the dangers of alcoholism. (I, S)

2.16 Identify the symptoms of venereal diseases and the methods of prevention and control of these diseases. (I,S)

2.17 State the importance of home sanitation, safety measures, and recreational activities involved in planning a good physical environment. (E, I, S)

2.18 Contact a reputable physician for medical advice, and set up an effective control procedure for obtaining and using prescribed medications. (I, S)

3.0 Skills Related to Communicating Ideas

To successfully communicate with others, a pupil should be able to do the following:

3.1 Verbally express thoughts clearly and pleasantly. (E, I, S)

3.2 Explore language and attach meaning to the spoken and written word and to the sounds of the environment. (E, I, S)

3.3 Express and appreciate creativity as a means of self-expression. (E, I, S)

3.4 Use and relate various gestures, facial expressions, and actions in communication. (E, I, S)

3.5 Identify and perform the basic mathematical processes. (E, I)

3.6 Read and interpret materials needed in daily living. (E, I, S)

3.7 Read and write independently and coherently to meet personal job needs. (I, S)

3.8 Utilize radio, television, movies, newspaper, and advertisements. (I, S)

4.0 Skills Related to Money

To work with money, a pupil should be able to do the following:

4.1 Recognize money and know its value. (E)
4.2 Properly care for small amounts of money. (E)
4.3 Relate work to earning money. (E, I)
4.4 Make small purchases. (E)
4.5 Initiate a savings plan. (E, I, S)
4.6 Compute approximate income less deductions. (S)
4.7 Make a budget, and keep a balance sheet for personal funds. (E, I, S)
4.8 Demonstrate a working knowledge of credit buying and legal aspects. (S)
4.9 Compare benefits of various types of insurance, and relate them to individual needs. (S)
4.10 Explain the basic tax structure, responsibilities, benefits, and obligations. (S)
4.11 Recognize the basic procedures and practices of good consumer buying. (E, I, S)
4.12 Understand and evaluate ethical sales promotion and fraudulent business schemes. (S)
4.13 Identify laws pertaining to misuse of money and to protection from illegal actions. (I, S)
4.14 Distinguish between fees, dues, and donations. (I, S)
4.15 Understand the responsibilities involved in using credit cards. (I, S)
4.16 Identify and use the services offered by a bank. (I, S)
4.17 Develop individual interests and skills in hobbies for pleasure and for profit. (E, I, S)
4.18 Relate money concepts to postage and money orders. (S)

5.0 Skills Related to Working with Measurement

To work with measurement, a pupil should be able to do the following:

5.1 Demonstrate verbally or in writing a general knowledge of the basic time-measurement concepts. (E, I)
5.2 Use the vocabulary and tools of linear measurement accurately in daily living, in vocational experiences, and in homemaking contexts. (E, I, S)
5.3 Relate the general knowledge of weights to appropriate use in life situations. (E, I, S)
5.4 Use appropriate units of volume measurement in life situations. (E, I, S)

5.5 Interpret and relate the importance of temperature to health and safety, homemaking skills, and work equipment. (I, S)

5.6 List and correctly use vocabulary, symbols, and tools for the measurement of areas. (I, S)

5.7 Read and use vocabulary needed to interpret charts, graphs, and scale drawings. (S)

5.8 Explain speed in relation to time and distance, traffic safety, and work activities. (I, S)

5.9 Identify and use vocabulary and abbreviations associated with natural and man-made pressures. (I, S)

5.10 Relate efficiency and time to ways of performing tasks. (S)

6.0 Skills Related to Getting Along in an Expanding Community

To get along in an expanding community, a pupil should be able to do the following:

6.1 Recognize the duties of family members and the aspects of family cooperation and loyalty. (E, I)

6.2 Identify the characteristics of the neighborhood and the responsibility of the individual and his family unit to the neighborhood. (E, I, S)

6.3 Adapt to the rules of the school, display a good sense of school spirit and involvement, and become a participating and contributing member of the school. (E, I, S)

6.4 Explain governmental organization of community and county and the role of the individual as a part of the community-county government; and identify and use the services available to citizens of the community. (I, S)

6.5 Describe important functions of the state government, the benefits to the individual, and the responsibilities of the individual citizen. (I, S)

6.6 Exhibit general knowledge of national history, government, and resources; and identify the benefits available to citizens and the responsibilities of each citizen. (I, S)

6.7 Explain in general terms the interdependence and responsibility of all nations of the world. (S)

7.0 Skills Related to Coping with the Physical Environment

To adjust to his physical environment, a pupil should be able to do the following:

7.1 Explain the effects of the earth's physical phenomena and man's adaptation to climate. (E, I, S)

7.2 Describe the uses of plant life for food, shelter, clothing, chemicals, and medicines. (E, I, S)

7.3 Explain the dependence of man on other animals, and identify the relationship of animal life to the total environment. (E, I, S)

7.4 Describe various synthetic materials and their uses. (E, I, S)

7.5 Discuss sources of energy and the importance and use of energy and machines in daily life. (E, I, S)

7.6 Identify the earth in relationship to the universe, and list the reasons for space exploration. (E, I, S)

8.0 Skills Related to Maintaining a Home

To properly maintain his home, a pupil should be able to do the following:

8.1 Determine rights, responsibilities, procedures, and restrictions involved in both renting and purchasing a home. (S)

8.2 Demonstrate proficiency in choosing and using household furnishings, appliances, and equipment. (I, S)

8.3 Prepare and use an appropriate household budget. (S)

8.4 Identify home legal responsibilities; and demonstrate an understanding of liability, responsibility, property rights, records, and taxes. (S)

8.5 Exhibit a knowledge of housekeeping responsibilities and competencies for efficient organization and maintenance of the home. (S)

8.6 Plan and prepare nutritious well-balanced meals that encourage good eating habits. (I, S)

8.7 List the responsibilities for the selection, purchase, and care of appropriate clothing. (I, S)

8.8 Plan and participate in recreation for the family at home and at recreational facilities. (E, I, S)

8.9 Explain the importance of establishing and maintaining good family health care and the availability of community health services. (E, I, S)

8.10 Explain the need for proper home safety and emergency regulations, and identify the necessary procedures, materials, and equipment involved. (E, I, S)

8.11 Identify and develop the skills needed for home-related vocations, such as housekeeping, gardening, and hobby activities. (I, S)

8.12 List and be able to perform the tasks involved in yard care and simple home maintenance. (I, S)

9.0 Skills Related to Using Leisure Time

To derive the most benefit from his leisure time, a pupil should be able to do the following:

9.1 Plan and participate in informal and formal group activities, such as family recreation, travel groups, community and club activities, and spectator sports. (E, I, S)
9.2 Develop the interest and the skills needed to participate in individual and team sports both as a participant and a spectator. (E, I, S)
9.3 Establish skills and interests to pursue a hobby. (E, I, S)
9.4 Understand and appreciate, as a leisure-time activity, many different types of music. (E, I, S)
9.5 Meet and converse freely with others. (E, I, S)
9.6 Locate and participate in local recreational activities. (I, S)
9.7 Locate and use outdoor leisure-time facilities. (I, S)
9.8 Develop interest and skill in individual and group games. (E, I, S)

10.0 Skills Related to Career Development

To develop his career potential, a pupil should be able to do the following:

10.1 Exhibit competent work skills, dependable habits, and cooperative attitudes. (E, I, S)
10.2 Understand and relate job descriptions to personal occupational needs. (I, S)
10.3 Identify necessary skills realistically; and utilize services of federal, state, and private organizations to locate job opportunities. (S)
10.4 Answer verbally and/or in writing the driver's test relating to laws, safety, and driver courtesy; and drive a car to the satisfaction of the driver training instructor and the Department of Motor Vehicles. (S)
10.5 Make job inquiries by phone, letter, and in person; and complete job application forms correctly. (S)
10.6 Demonstrate proper interview techniques and appropriate grooming for job interviews. (I, S)
10.7 Cite job safety requirements for different working areas, and demonstrate good safety habits. (E, I, S)
10.8 Explain the purpose of various employment benefits, such as medical insurance, pension, unemployment insurance, social security, salary protection, and workmen's compensation. (S)
10.9 Describe the purpose of unions, and explain the advantages and disadvantages of membership. (S)
10.10 Identify federal and state labor laws and their application to the individual worker. (S)

10.11 Explain the different procedures and types of salary deductions and pay procedures. (S)
10.12 Demonstrate abilities in the usage and computation involved in check-cashing procedures. (I, S)
10.13 Explain the purposes and benefits of tax and payroll deductions, and compute tax deductions and net take-home pay. (I, S)
10.14 Understand that tests related to employment offer a systematic approach to match the employee to the employment task. (S)
10.15 Compare and contrast gainful employment versus state welfare; and relate the success of the company to the contributions of the employee. (S)
10.16 Use previous experience to facilitate personal and social relationships and to develop acceptability in employment. (E, I, S)

Developing Behavioral Objectives

Although goals determine the direction a program will take, more specific objectives are needed to clearly define the desired accomplishment and to indicate acceptable conditions. The *Planning, Programming, Budgeting System Manual for State of California School Districts* defines an objective as "a desired accomplishment that can be measured within a given time and under specifiable conditions. The attainment of the objective advances the system toward a corresponding goal" (83, p.9).

Program evaluation and accountability can be applied when pupil objectives are clearly stated. Two examples of high school program objectives (the first process-oriented and the second product-oriented) might be the following:

1. By the end of the junior year, all educable mentally retarded students will have participated in a minimum of three on-campus and one off-campus job placements.
2. As rated by on-campus job supervisors, educable mentally retarded students will be able to perform on two different jobs at a level of adequacy that is acceptable for paid employees.

By assessing needs, by determining goals, and by stating specific objectives, the teacher can determine what the pupil should learn and what skills he should possess. Thus, the curricular question of "what" is answered. The answer is given in general terms by the goals and in specific terms by pupil performance (behavioral) objectives.

Teachers of the educable mentally retarded might develop or adopt sets of performance objectives that are based on the goals listed on the preceding pages. The objectives must indicate the performance that is expected, and they must be measurable. For each goal of the program there should be one or more objectives that will move the pupils toward achievement of the goal.

School districts may wish to adopt a format that lists the goal and the objectives on a performance checklist. If the teacher chooses to do so, the checklist could be duplicated for the purpose of maintaining records of individual performance. Examples of different checklist formats are presented on the following pages. The examples shown were taken from *Curriculum Guide in Mathematics for Teachers of Students with Learning Problems* (26).

Priorities and Program Activities

Once the curricular "what" has been answered by goals and objectives, the next question is "when." The answer to this question involves the pupil's developmental level or readiness and the setting of priorities. The pupil's developmental level may relate to such factors as chronological age, mental age, experience, or interest. The teacher, using all available information, is in the best position to determine the readiness of the pupil to learn a particular task. Careful analysis of readiness is a requisite in determining the "when" of educational experiences for retarded learners.

The other major factor in determining "when" is priority status. Even though the teacher is ready to teach and the pupil is ready to learn, other requisites may not be present. Inhibiting factors may be indifferent administrative support, poor facilities, deficient equipment and materials, or inadequate parental support.

Overcoming the inhibiting factors may be mostly a matter of determining priorities. These priority rankings should be arrived at systematically with the involvement of teachers, pupils, parents, administrators, community representatives, and members of the local board of education. Priorities are determined by analysis of needs, goals, objectives, and resources. Assignment of adequate resources to priority items will usually result in realistic curricular success.

Once needs have been identified, goals and objectives determined, and priorities set, then activities can be arranged into programs that are directed toward the achievement of the goals and objectives. The responsibility for this part of the instructional model rests basically with the teacher; the concurrence and assistance of the school administrator and the special education curriculum supervisor are, of course, required. Teachers use a variety of teaching techniques to motivate and maintain pupil interest and to provide for the needs of different subject or skill areas and different learning styles.

Example No. 1

Performance Checklist

Pupil's name

Date of evaluation

Curriculum Area Goal No. 1.1

Pupils will be able to demonstrate acceptable behavior in coping with stress and in establishing a realistic self-concept.

	Pupil performance*		
Performance objective	*Initial skills*	*Usually correct*	*Skill mastered*
As observed and evaluated by the teacher in simulated experiences and in daily living situations, the pupil will demonstrate an ability to do the following: 1.1.1 Identify himself by name, sex, age, school, and home address. 1.1.2 Verbalize a concept of self that is realistic and positive in terms of personal appearance and physical capabilities. 1.1.3 Verbalize a concept of self that is realistic and positive in terms of how others see him. 1.1.4 Accept criticism and failure, as well as praise and success. 1.1.5 Express antagonisms and frustrations in socially acceptable ways. 1.1.6 Recognize and choose socially acceptable behavior when there is a conflict of interest.			

*Record level of pupil performance with a ✓ in the appropriate column.

Example No. 2

Performance Checklist

Pupil's name

Date of evaluation

Curriculum Area Goal No. 3.5

Pupils will be able to identify and perform the basic mathematical processes.

*Performance objective**	*To 5*	*To 10*	*To 20*	*To 50*	*To 100*	*To 1,000*
At the request of the teacher, the pupil will demonstrate the ability to do the following:						
3.5.1 Repeat counting words in order.						
3.5.2 Count with one-to-one correspondence between words and objects.						
3.5.3 Identify number of objects in a set.						
3.5.4 Build sets to correspond to a given number.						
3.5.5 Write numerals that correspond to a given set.						
3.5.6 Count silently.						
3.5.7 Draw pictures of sets to correspond to given numerals.						
3.5.8 Write numerals correctly.						

*Record level of pupil performance with a ✓ in the appropriate column.

____
Date of evaluation

Performance Checklist

Curriculum Area Goal No. 10.5

Pupils will be able to make job inquiries by phone, letter, and in person; and complete job application forms correctly.

	Record of pupil mastery*														
Performance objective	*Mary A.*	*Ben B.*	*Alex C.*	*Mario D.*	*John E.*										
As observed and evaluated by the teacher in simulated experiences and in daily living situations, the pupil will demonstrate the ability to do the following: 10.5.1 Properly make a telephone inquiry concerning a known job opportunity. 10.5.2 Write a letter, using correct form, in making application for a job. 10.5.3 Participate in an acceptable manner in a personal job interview. 10.5.4 Complete, unassisted, a job application form.															

*Record pupil accomplishment of each objective with a ✓ in the appropriate column.

Observation of a number of classes for the retarded would disclose that most teachers employ several instructional approaches. Encompassed in each of these approaches, however, is the need to analyze the learning task in terms of learner performance. This task analysis should follow the previously defined processes—assessing needs, determining goals and objectives, setting priorities, and so forth.

To bring greater precision to the teaching-learning process, a teacher may analyze learning tasks as follows:

1. State the objective in terms of expected learner performance.

   Objective: As observed and evaluated by the teacher in simulated experiences and in daily living situations, the pupil will demonstrate the ability to complete, unassisted, a job application form.

2. List the prerequisite skills that are needed by the learner in order to perform this task.

   Example a: The pupil must be able to read the content of the application form.

   Example b: The pupil must be able to write legibly and spell correctly the words required to complete the application form.

3. Determine the incremental learning steps and/or skills that the learner must develop if he is to perform the terminal objective. Analyze the task for its sequence of development, or its component parts.

   Example a: The pupil will complete the first section of the application form by correctly filling in the blanks for name, address, telephone number, and so forth.

   Example b: The pupil will complete the second section of the application form by correctly writing in his personal data, such as age, birthplace, sex, and marital status.

4. Identify the teaching strategies that will be used to assist in the learning process.

   Example a: The teacher will use the overhead projector to familiarize pupils with various job application forms.

   Example b: The teacher will supply pupils with different application forms for study and review.

5. Evaluate success in terms of learner performance.

   Example a: The teacher will use informal procedures to evaluate progress.

   Example b: The teacher will observe the ability of the learner to perform the task in a real situation.

When the learning task has been analyzed in terms of learner performance, the teacher will be able to use the evaluative information to provide feedback to various parts of the instructional model.

The instructional model that has been described in this chapter is shown in Figure 1. The process portrayed in this model is basic to the success of educable mentally retarded pupils. Within any of the administrative models authorized by law and by regulation, the instructional model that is adopted must be based on the needs of these pupils and must be directed by goals, objectives, program planning, and program evaluation.

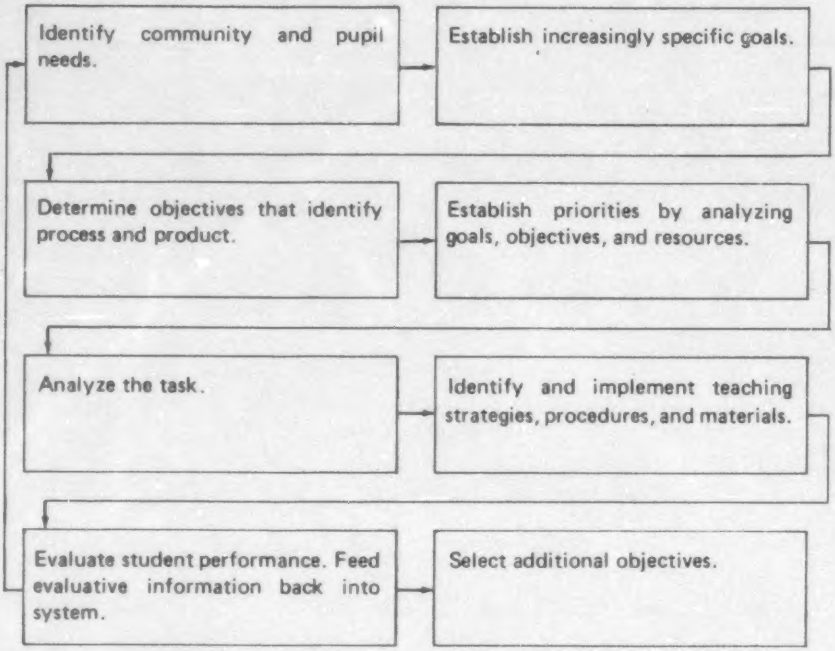
Identify community and pupil needs.
Establish increasingly specific goals.
Determine objectives that identify process and product.
Establish priorities by analyzing goals, objectives, and resources.
Analyze the task.
Identify and implement teaching strategies, procedures, and materials.
Evaluate student performance. Feed evaluative information back into system.
Select additional objectives.

Fig. 1. Sequence of program planning and implementation

Chapter 6

Evaluation of Programs for the Educable Mentally Retarded

The improvement of programs providing services to the educable mentally retarded is largely dependent upon adequate evaluation of the quality of services being provided. The curriculum is a major variable that influences the quality of the program. Therefore, the curriculum must be developed and stated in terms that will permit it to be a part of the total evaluation plan.

Program evaluation is a broad and complex topic. In general, there are two facets of educational evaluation. First, the product must be evaluated. One must be able to measure the change that takes place in the pupil as a result of his interaction with the educational system. Second, the process must be evaluated. This evaluation must include a measurement of the effectiveness of the educational system in bringing about the desired change in the product.

Definition of Educational Evaluation

The evaluation of an educational system may be defined as a procedure whereby information is systematically collected for the purpose of making decisions. The assumption is made that the data obtained will provide a rational basis for making decisions.

Essential components of the evaluative procedure include the following:

1. The evaluator, who is charged with the responsibility to implement the evaluation plan
2. The evaluated object, which may be a total educational system, a single pupil, a curriculum, or any one of a number of other evaluation objects
3. The processed data, which may be objective or descriptive input
4. The evaluation plan, which must include such things as the identification of the evaluator, the sources of data to be obtained, the procedure that will be used to analyze the data, and the specific time periods involved in the collection and analysis of such data
5. The decisions, which presumably will be influenced by the evaluation plan

Evaluation of the Program and Product

An assumption is often made that one can evaluate the effectiveness of a given educational system by evaluating the products of that system. If such an assumption is valid, one would need to compare the performance of pupils at the completion of a phase of their training with the performance of those same pupils at the beginning of that particular phase of training. An alternative may be to compare the performance of the pupils to that of similar pupils in other systems. Also, if the evaluation data are to be useful in changing the system, they must establish the relationships within the system to specific subcomponents or processes that are contributing to the changes being measured. Otherwise, one cannot determine which parts of the system are positively contributing toward change of the products and which parts may be neutral or making a negative contribution.

If the purpose of the evaluation is to measure the attainment of specific instructional objectives, an appropriate evaluative procedure must be designed. Popham and Husek (85) differentiate between norm-referenced measurement and criterion-referenced measurement of performance. According to Popham and Husek, a norm-referenced test is used to measure an individual's performance in relation to the performance of others in the same test. A criterion-referenced test may be used to measure an individual's position with respect to an established standard of performance.

Examples of norm-referenced measurement would be standardized tests of achievement or tests of intellectual ability. In such tests the individual is compared with some arbitrary normative group, which is the "norm-reference." On the other hand, if one wishes to compare an individual's status with respect to a specific criterion, a test can be devised that will measure his performance against an established criterion.

Criterion-Referenced Evaluation

The current state of evaluation is imperfect, and the specifications of behaviors to be evaluated have also been made on an imperfect basis. However, the precision and effectiveness of current evaluation systems lag far behind the potential for development of such systems. One of the promising directions for the improvement of evaluation is the continued development of criterion-referenced measurement. As the curriculum used is restated in observable, measurable objectives, it can be the criterion by which individual progress is measured. The ultimate goal of evaluation is to determine the degree to which the product of the school system has been changed in a specified direction. The components of this system, therefore, must be evaluated to determine the degree to which they contribute to the behavioral change in the individual pupils.

Several alternative procedures could be used to devise a criterion-referenced evaluation test that actually would be a checklist based on the stated curriculum objectives. One could simply take every curriculum objective and develop a checklist for the entire curriculum. One also could take a sample of the objectives by developing a checklist to include every third, every fifth, every tenth, or every "nth" objective on that list.

A criterion-referenced checklist may be used for several types of evaluation. If one wishes to assess the degree to which individuals in the group have mastered the curriculum, one would use the entire checklist for determining the degree to which the curriculum has been mastered. However, in the special education instructional program, the system of delivery will tend to select the objectives that are most appropriate for each individual within the system. Therefore, to evaluate individual performance, the checklist may be based upon those objectives that have been determined to be a part of the pupil's instructional program. If this procedure is used, the evaluator would need to assume that the teacher has made valid choices in determining which objectives are appropriate for the pupil and that the validity of this decision rests with the decision maker rather than with the total curriculum.

The preceding statement can be illustrated by the following example. Suppose an area of curriculum contains 250 objectives, and "Teacher A" used 50 of these objectives. If the pupil's performance on those 50 objectives was close to 100 percent, one might conclude that the teacher's instructional program was highly successful and internally consistent. In contrast, suppose "Teacher B" utilized 100 of the 250 behavioral objectives in a given area of curriculum. If the evaluation of a pupil or a group of pupils exposed to those 100 objectives indicated achievement of 65 percent, would one assume that "Teacher B" was 65 percent effective? In other words, is "Teacher B" considered less effective than "Teacher A"?

"Teacher B" may have held higher expectations for the group and determined that 100 of the 250 objectives were appropriate. In this situation it becomes readily apparent that the criterion-referenced system of measurement or the data obtained by it can only establish the degree of fit between the achievement of the pupils and the expectation of the teacher. However, this degree of achievement interacts with a number of other variables within the system of delivery. If the pupils referred to in the above illustration are evaluated by a criterion-referenced measurement based on all 250 of the objectives, and one group of pupils achieves 20 percent of all objectives and the other group achieves 26 percent of all objectives, can such data be used for comparative purposes or for the evaluation of the teacher? Before such an application could be made, one would need to accept the assumptions that the curriculum was valid and appropriate and that the two groups of pupils were comparable in learning ability in that curriculum area, that both entered at similar levels of performance, and that the system of delivery was relatively constant with the exception of the teacher variable.

Without evidence indicating that the preceding assumptions are reasonable, the only conclusion the evaluator can make is that there is an indication of fit between the performance of the pupils and the expectation of the teacher in the attainment of the curricular objectives. To extend the interpretation beyond this, one would have to consider the prior assumptions reasonable. Therefore, the behavioral checklist used for the criterion-referenced evaluation should consist of all curricular objectives or a random sample of all curricular objectives. Also, before the system is established, the teacher or the decision-making person should identify the objectives that have been presented to the pupil as appropriate for that pupil.

The objectives that are indicated by other diagnostic data and observations to be below the pupil's entry level into the curriculum should be identified. A single criterion-referenced evaluation could then determine both the effectiveness of the individual educational plan and the degree to which this plan reflects the expectancy of the curriculum. Because these criterion-referenced measurement procedures appear to rely on the acceptance of certain implicit assumptions, one must delineate the purpose of the evaluation and state the assumptions on which interpretation of the data is based.

Norm-Referenced Evaluation

In planning a norm-referenced evaluation of the educable mentally retarded pupil, the purpose of the evaluation must be identified. If the purpose of the evaluation is to determine the degree to which a pupil is performing in academic areas as compared to the performance of other pupils at a comparable age or developmental level, standardized tests of achievement may be used. Such tests include a discrimination index and a difficulty level, which allow the individual to perform within the measuring range of the test. For comparative purposes these tests also include a norm that is standardized with an appropriate group. Most standardized achievement tests are standardized with normal populations, and the interpretation of such normative data is based on chronological age or grade placement of the "normal" individuals used in developing the test. These standardized tests often are inappropriate because they do not meet the previously stated conditions for a retarded population.

Standardized tests may be used to measure change in performance or progress in academic areas, if one interprets change in raw scores from a statistical point of view; that is, the degree of change above a chance level of change, from pretest to post-test, must be considered rather than an interpretation against a normative population which may be inappropriate. However, the evaluator should keep in mind that as pretest and post-test correlations increase, the statistical reliability of the difference in pretest and post-test scores decreases.

Additional objectives of the educable mentally retarded program include growth in social and behavioral characteristics. To measure change in these areas, norm-referenced measures, such as the *Vineland Social Maturity Scale* or the *AAMD Adaptive Behavior Scale*, may be used and interpreted against norm-referenced groups that are similar to the educable mentally retarded group being measured. Other scales now being developed give some promise of norm-referenced measurement that can be used to compare individuals to an appropriate normative reference.

Norm-referenced evaluation may still be required to achieve an outside validation of the content of the curriculum or the claim made by a system of delivery that it is, in fact, a viable, efficient system. However, such validation depends upon norm-referenced instruments of practical validity. Practical utility of such validation assumes that the behavior being measured is consistent with society's expectation of the school program.

Norm-referenced evaluation, using a criterion from outside of the system, may also be required to substantiate teacher effectiveness or a system's claim of effectiveness. The criterion-referenced measure may establish the internal consistency of the system but not necessarily its efficiency or its validity against outside criteria, unless standardized criterion-referenced instruments are developed.

Validation of Curriculum

Currently, many problems of evaluation are unresolved. For example, if one wishes to validate a curriculum and utilizes valid norm-referenced instruments that have been used with a population comparable to the educable mentally retarded group, the value of the curricular area being tested can still be questioned. To establish the validity of that which is being measured against some outside criterion, the school system would need to clearly identify the objectives of that system or accept clearly identified educational objectives from the outside. Such clearly stated objectives have not yet been completely specified (and probably never will be), partly because society shifts in terms of its values and expectations of its so-called "normal" members as well as in its values and expectations of those who deviate from that norm.

Today, curricula are being designed that are described as sequentially developed according to an ascending order of item difficulty within each area of the curriculum. A validation of such a claim would rest on the assumptions that the items have varying levels of difficulty and that these levels of difficulty would not interact differentially with individuals being exposed to the sequence. In practice, either or both assumptions appear to be only partially correct.

If a criterion-referenced evaluation model is devised that basically consists of a checklist of the curricular objectives, and if both the checklist and the areas of the curriculum are held to be sequentially arranged in ascending orders of difficulty, the postmeasure probably would achieve close to 100 percent success on curricular objectives to a given point and then soon change to almost 100 percent failure past that given point or level of difficulty. Theoretically, the change from pass to fail would occur at that point on the ascending order of objectives that separates the objectives already taught from the balance of the curriculum. However, before one could expect to make such a conclusion, one would need to validate the sequential difficulty level of the objectives within that curriculum. Also, one would have to assume that the difficulty level of the objectives in the curriculum interacts nondifferentially with most of the individuals subjected to that curriculum and system of delivery. This assumption may be unwarranted unless the difficulty level of the steps in the curriculum is validated against groups of both retarded and nonretarded pupils at different levels of development.

If success in the performance of objectives within the curriculum correlates highly with the relative step of the objective in the curriculum (from "easy" to "more difficult") and with the performance of different representative groups of individuals, some validity can be attributed to the ascending order of difficulty level of the items in the curriculum.

Evaluation of the System of Delivery

In designing an evaluation model that will adequately assess the effectiveness of an educational program for the educable mentally retarded, as well as the growth being made by the retarded individual in that program, it is necessary to evaluate the entire system that delivers the services to the pupil as well as the change that takes place in the pupil. Therefore, such evaluation will include the entire system of delivery or the process needed to effect change in the pupil. Within the process evaluation design, particular attention must be focused on the decision-making and implementing capability of the system and on the efficiency of communication within the system.

A major assumption made for evaluative purposes is that effective decision-making capability is essential to the effectiveness and efficiency of an educational system of delivery. A further assumption is that effective decision-making capability requires adequacy of communication within the system. Therefore, the decision-making process and the communication process within the system of delivery should be appraised critically on a continuing basis.

The assumption that a strong positive relationship exists between the viability of an organizational structure and its decision-making characteristics supports the contention that decision-making capability must be a part of the process evaluation.

A further assumption is made that the organizational structure of an educational system must have an effective communication network within that system in order that effective decisions can be made and implemented. The necessary data must be supplied to the decision makers and be available to them before their decisions can be made. Before one can test the effectiveness of the communication network within the system, as well as the effectiveness of the decision-making process, one must specify the decisions that are to be made by that system. Examples of such decisions include the following:

1. Decisions that directly affect pupil performance
   a. Specification of curriculum
   b. Identification of appropriate global objectives to be achieved over a period of time
   c. Identification of specific behavioral objectives to be achieved on a daily basis
   d. Specification of activities designed to achieve the specific daily objectives
   e. Evaluation of individual pupils to determine (a) when objectives have been achieved; (b) which objective is to follow the one completed; or (c) if the objective is not achieved, should its achievement be postponed and a more appropriate objective be substituted
2. Decisions in the area of physical plant and facilities and procurement of materials necessary to carry on the instructional program
3. Decisions regarding the costs and cost effectiveness of the school program as well as decisions relating to the budgeted

monies currently available and the priority demand that should be placed on the total school budget for additional funds if necessary

4. Decisions concerning the evaluation of the system and the products of the system

In determining the effectiveness of the decision-making process, evaluators must specify the level at which decisions will be made regarding each of the above questions. Data must be available to the decision makers at the appropriate time if decisions are to be implemented effectively.

Decisions made in regard to facilities, financial support, and system evaluation may affect the entire school operation, including its program for the educable mentally retarded. Relationships to the decision-making process should be identified to provide adequate means of using available data for decision making within the system.

The evaluation process should include regularly scheduled checks on the system's capability to communicate necessary data and to implement decisions. The analysis of the problem areas related to decision making and communication can be based on a simple observation of the system in operation. The evaluator must have a clear picture of the decisions to be made and a precise identification of the personnel within the system responsible for making those decisions. The evaluator must also know the data on which decisions will be based. A timeline should be specified indicating when specific data will have been analyzed so that they can be interpreted for decision-making purposes. An evaluation of the organizational structure by an outside management evaluation team may be necessary if there appears to be sharp disagreement among the evaluative decisions made by the evaluators within the educational system. Such disagreement may be between the management personnel and teachers, between teachers and aides, or between teachers and consultants. In some cases it may be feasible to employ measurement analysts to conduct specific evaluations of specific subcomponents of the system.

Implications for Curriculum Development

The focus of this chapter has been on problems related to the evaluation of special education programs for the mentally retarded. In the discussion of process evaluation, the evaluation of the total program of service to the mentally retarded was considered. In the discussion of product evaluation, the following were considered: (a) additional information for the evaluation of the total program and the components within the delivery system; (b) evaluation of change in the behavior of the individual pupil; and (c) evaluation of the progress made by the pupil toward the achievement of curricular objectives.

The implications for the development of curriculum are most apparent in regard to the last two of the preceding statements. In the process of developing a curriculum, the curriculum must be stated in terms that lend themselves to evaluation of the performance of those exposed to that curriculum. The plan for evaluation must grow out of the curricular objectives; that is, the curriculum must be written so that evaluation will reside in the curriculum itself. The curriculum must be specified in terms of observable objectives and entry levels so that the teacher can effectively use the results of the evaluation in the classroom. The results of the evaluation will not only determine the degree to which the curricular objectives are achieved, but they will also enable the teacher, evaluator, or decision maker to determine at which level the pupil should enter the curricular sequence.

Even though appraisal–"fit" between the pupil and the curriculum–is of primary importance in the evaluative procedure, a caution should be expressed. Most pupils in special education programs will have unique needs. Therefore, it will not be feasible to develop the entire instructional program on the basis of curricular objectives specified for groups of pupils without adding extra objectives to meet the unique needs of individuals. The added objectives will have to be considered in the evaluation plan being developed for use by the teacher in the classroom as well as in the evaluation plan for the entire system.

Program evaluation does not happen without effective planning. Consideration must be given to evaluation staff, time, and budget in the evaluation plan.

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